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REGIONS OF THE UNITED STATES

The Web of Life

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The Web of Life

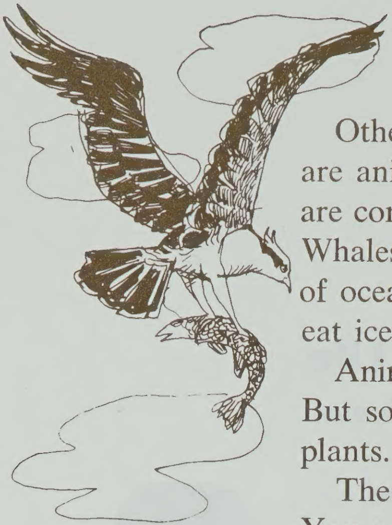
Leon Trachtman

On earth, life is everywhere. It is in the rivers, the seas, and the forests. It is under the ground and in the air. It is in the frozen northland and in the burning deserts. There is hardly a place on the earth where there are no living things.

Life clings to the earth like a kind of web. It is rarely found more than a few hundred feet above the surface of the earth. It is rarely found more than a few feet below the surface.

The different forms of life are connected to one another like the strands of a web. Pull one part of the web hard enough, and all the other parts are moved out of shape. Change one form of life in the web of living things, and all the other kinds of life will change also.

This network of living things includes humans, plants, and animals. They are all kept alive by sun, soil, and water. Some living things are called *producers.* Green plants are the producers. They are the only forms of life able to turn nonliving matter into food. They change water and carbon dioxide from the air into food. These plants can be tiny, as plankton in the sea. They can be big, as the giant trees of the forest. But all green plants produce food.



Other living things are called *consumers.* Consumers are animals that eat the food-producing plants. Cows are consumers when they munch grass in the meadow. Whales are consumers when they swallow gallons of ocean plankton. You are consumers when you eat ice cream or spinach.

Animals that eat plants are called *primary* consumers. But some animals—lions, for example—do not eat plants. They eat meat.

The lion eats the zebra, which has fed on grass. You eat the meat of cattle and pigs, which have fed on grass and corn. Meat-eating animals are called *secondary* consumers. They get their green plants secondhand. Humans are both primary and secondary consumers because they eat both plant and animal matter.

Other living things are called *decomposers.* Decomposers use dead plants and animals for food. Bacteria and fungi are the chief decomposers.

Without decomposers, what would happen in the forest? Nothing would decay. The leaves that fall from the trees each year would pile higher and higher. Fallen trees would fill the open spaces. Bodies of dead birds and animals would lie everywhere. There would be no fertilizer to enrich the soil. So the soil would become thin and rocky.

Decomposers keep this from happening. They make the trees, the leaves, and the bodies of animals decay. Decayed matter fertilizes the soil of the forest. From this soil, new trees and flowers can sprout. These become food for another generation of consumers.

All living things need one another. The study of how plants and animals live together and make life possible is called *ecology*. People who study ecology are *ecologists*.

The great web of living things needs energy to keep on living and growing. The sun shines on the earth, giving its energy to the green plants. The green plants use some energy to send their roots down into the soil and draw out the minerals they need for growth. Plants also store energy.

Animals that eat plants absorb some energy from the plants. In turn the animals use up part of the sun's energy. Animals also store a part of the sun's energy in their flesh.

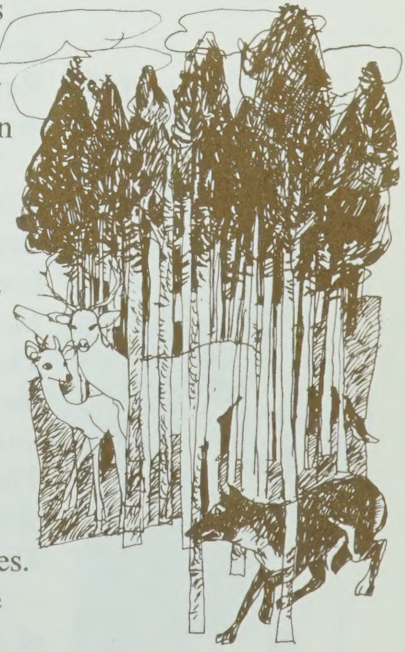
When we eat a slice of beef, we are eating the stored energy of the sun. It goes from the sun to the plant, then to the animal, and finally to us. All living things are storehouses for part of the energy they have consumed.

No matter where we get our food, the chain begins with green plants. Green plants store energy in the form of *chlorophyll*. The plants make chlorophyll by combining sunlight with water, soil matter, and carbon dioxide. Animals eat the green plants and are able to use the energy stored in chlorophyll.

Usually the producers, the consumers, and the decomposers keep the whole network of living things in balance. They keep the web of life steady.

For example, let us imagine an island that is covered with birch trees. Suppose that there are only two groups of animals on this island. There are a herd of deer and a pack of wolves. The trees grow in the soil and produce food.

The deer eat the tender bark and leaves of the trees. They are the primary consumers. The wolves are the



secondary consumers. They eat the deer. The bacteria, or decomposers, in the soil turn the fallen trees, the dead deer, and the dead wolves back into the forest soil. This enriches the soil, which in turn produces trees and more bark for the deer to eat. It is a balanced world of nature. But what happens when the balance is disturbed?

Suppose that an illness kills many of the wolves. If there are fewer wolves, fewer deer will be eaten. The number of deer will increase. There will not be enough trees to provide food for all the deer. The trees will all be eaten. Then part of the herd will die of starvation.

The wolves, or secondary consumers, were one part of the web of life. When something happened to them, the whole web was upset. The trees were destroyed, and so were the deer.

Man has upset the balance of life in many parts of our country. In doing so, he has created three big problem regions. They are the upper Great Lakes Region, the southern Great Plains Region, and the Appalachian Mountains Region.

The sandy plains of the upper Great Lakes Region were once covered by beautiful forests of white pine. But men built cities nearby. They needed lumber for houses. The white pine trees sold for a high price. Men cut down the trees for shelter and for profit. The forests were soon destroyed. Men cleared away the brush and plowed the soil. But the sandy soil was not good for crops. So the farmers moved away. The land had been stripped of its forests and the best of its soil. There was no food or shelter for animals. The animals had to move away, too.

The southern Great Plains Region was once a region of rich grasslands. This was the home of deer, antelope, and buffalo. Grass provided food for the animals. The animals provided food for the Indians and the coyotes.

Into this balanced world of nature came the explorers from Europe. After them came the settlers. They brought cattle with them. The cattle fed on the grasslands too. There was not enough food for all. So great herds of deer, antelope, and buffalo starved to death. Finally, the herds of cattle became so large that the range could not furnish enough food for them.

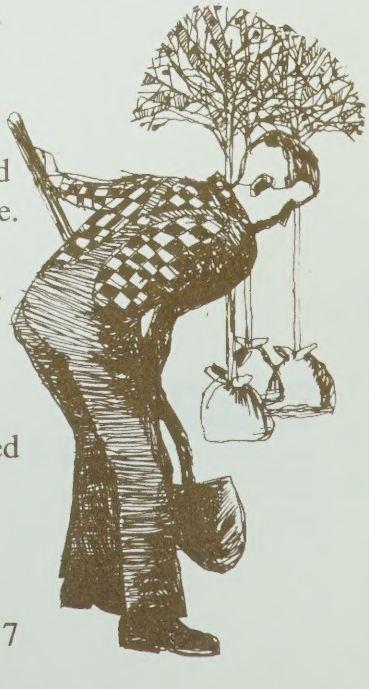
The Appalachian Mountains Region is the third problem region. Its mountains and valleys were once covered with forests. Each fall the trees shed their leaves and covered the ground with a thick, heavy blanket.

Millions of tiny decomposers went to work. They turned the dead leaves into a rich spongy layer above the soil. This layer made the soil very rich. It also kept the soil from being carried away by wind and rain.

Then men came to the region. They cut down the trees to build homes. They cleared the land for farms. They plowed up the soil. They upset the balance of nature completely.

The blades of the plow ripped apart rich layers of topsoil. The rains came and washed away the loose and unprotected soil. The trees were gone. The soil was gone. Nothing could grow on the bare and rocky hillsides. Farms became worthless. Families had to move away.

In these regions, men are now trying to restore the balance of nature. Forests and grasslands are being replanted. The number of cattle that can graze the Great Plains is being limited. Farmers have also learned how to plow so that wind and rain do not wash away their topsoil. But these areas probably will never be as rich as they once were.



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The Brave Settlers of Nicodemus

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Adapted from "Nicodemus: Negro Haven on the Solomon" by Glen Schwendemann in *Kansas Historical Quarterly,* Vol. 34, No. 1 (Spring, 1968). By permission of Kansas State Historical Society.

The Brave Settlers of Nicodemus

Ardis Sanders

The Civil War was over. The slaves had been given their freedom. The laws now said that they were free. But, in fact, the black men and women of this country were not really free.

Most Negroes could not vote. They had little education. They could not get good jobs. They lived in shabby houses, and they did not have enough to eat. Worst of all, they had little hope that things would ever get better.

Then exciting news trickled through the South. Negroes passed the word. They would be welcome to settle in Kansas. Posters appeared on walls. The posters promised Negroes a voice in government and equal rights. They urged Negroes to build new towns.

Benjamin Singleton led the campaign. He had been born a slave, but he escaped to the North. When the war was over, he returned to help other Negroes find a better way of life. He urged them to leave the South. As he traveled through the South, he talked to thousands of Negroes. He told them that land was cheap in Kansas. Any man could own a farm, he said. His words gave hope for a better life. Thousands began the long, hard journey to Kansas.

The governor of Kansas, John P. St. John, met Negro leaders as they arrived. Life on the frontier was hard, he warned.

The leaders replied that nothing was as hard as living in the South. They would rather die trying to reach a land where they could be free than return to the South. Nearly 20,000 Negroes settled in Kansas in one year. By 1881, they had built ten settlements.

One of the settlements was in the Solomon River Valley of western Kansas. The town was named Nicodemus in honor of another former slave. The people of Nicodemus were proud of their town. They invited Negroes from all over the United States to come to live there.

Many came. They traveled by railroad until they reached a town 35 miles from Nicodemus. From this point they had to walk. Usually, it took three days to walk to Nicodemus. There were no roads. They had to use a compass to find their way. At night they stopped and put up their tents. The darkness of the strange country frightened them. They built great bonfires. When wild animals came too close to the camp, the men fired their guns to scare them away. The March weather was cold and wet. Many people got sick.

Mrs. William Hickman, the wife of a minister, told about her first sight of Nicodemus.

"When we got in sight of Nicodemus, the men shouted, 'There is Nicodemus!'

"Being very sick, I hailed this news with gladness. I looked with all the eyes I had. I said, 'Where is Nicodemus? I don't see it.'

"My husband pointed out smoke coming out of the ground in several places. 'That is Nicodemus.'

“Then I could see that people were living in dugouts—really in holes in the ground.

“We set up our tents in Nicodemus. The scenery made me feel sad. I began to cry.”

There was a lot to cry about. All they could see was the open plains. There were no trees. How could they build houses? Where would they get firewood?

The land was as dry as a bone in summer. The soil was like rock. When the hard, beating rains came, the ground turned to thick black mud.

Dugouts were the only shelters that most early settlers on the Great Plains could make. The settlers dug out space under a bank or into a hill. Then they covered the opening with a roof of sod. When the rains came or the snow fell, the pioneers were grateful for their dugouts.

The people who settled Nicodemus had little money and no equipment. Few people have begun a new life with so little.

Some started the journey with money. But most of it was gone when they reached Kansas. The land was cheap. Even so, they didn’t have enough money to pay for it. They also had to buy food, tools, cattle, and seed.

Settlers helped each other. They borrowed equipment. Those who came earlier helped those who came later. People in other states sent supplies and money. But the people of Nicodemus wanted to support themselves as soon as possible.

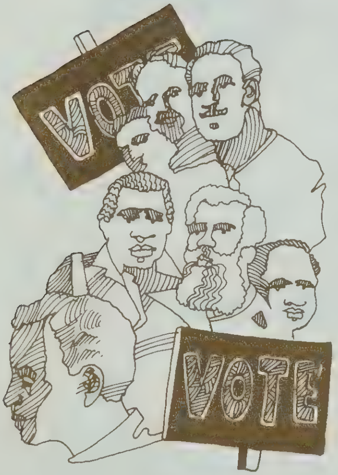
Many months passed before they could raise crops for their food. In the spring they did the farmwork by hand. They used spades to break up the sod. They used hoes to till the soil for the seed.

Some of the men left Nicodemus to find work in the cities. When they had saved money, they came back to their families. They used their money to buy food, tools, seed, and farm animals. When they ran out of money once more, they went away to earn more. Each time they came back to their farms, they bought more land for farming. Hardships did not matter if they could own land.

The other settlers in the region had great respect for these people who were once slaves.

This is what one newspaper wrote about the settlers of Nicodemus: "The people of Nicodemus know how to work. They are not afraid of work."

Another newspaper wrote: "Our neighbors of Nicodemus are intelligent, sensible, and law-abiding citizens."



Nicodemus was the most successful Negro settlement in Kansas. This was partly because the settlers wanted their children to have a good education. In the first months of the settlement, classes were held in a dugout. Later several schools were built in and around Nicodemus.

The settlers also wanted good government. They had a voice in their own government. This is why they had come to Kansas. They took part in township and county elections. Negroes were elected by both Negroes and whites to many different town and county offices.

Edward McCabe was one of the men who planned the little town of Nicodemus. Later he was elected state auditor of Kansas. He was the first Negro elected to a high state office in the North.

The town of Nicodemus thrived in the 1880s. The sod houses were replaced with frame houses when lumber was brought in. Churches were built. The business district grew larger. There were stores, a post office, a blacksmith shop, a bank, and hotels.

People said that the hotels of Nicodemus were among the best in that part of the country. In one hotel, called the Boles House, the cost of a good meal and a bed for one night was $.50.

As times improved, the people of Nicodemus enjoyed a lively social life. They formed baseball teams and had clubs and lodges. They had a music teacher and a town band. People in other towns liked to hear the Nicodemus band. For years it played in many parts of Kansas.

But the railroad did not come through Nicodemus. It was built several miles away. This kept the town from growing bigger.

Some businesses left Nicodemus. They moved to towns along the railroad. But most Negroes stayed. For fifty years, the population did not change very much. Then slowly people moved away to find work in large cities. By 1950, Nicodemus was almost empty. The post office closed. The story of Nicodemus was like that of many other small towns on the Plains. The people moved away to the cities.

But the people of Nicodemus did what they had hoped to do. They built a community where they could live in dignity. They earned the respect of all who knew them. They earn the respect of all those who read about them now.

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Letters from a Plainsman

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Adapted from John Ise (ed.): *Sod-House Days,* Letters from a Kansas Homesteader 1877-78, written by Howard Ruede, New York: Columbia University Press, 1937. By permission of the publisher.

Letters from a Plainsman

Howard Ruede

Some years ago, a bundle of old letters was found in a house in Osborne, Kansas. The letters had been written by Howard Ruede to his parents in Bethlehem, Pennsylvania.

Howard Ruede left Bethlehem in 1877 and went to Kansas. He settled about fifteen miles from Osborne on land near Kill Creek. The nearest railroad was fifty miles away.

If we had to live today as these pioneers did, we would say we were very poor. Yet Howard Ruede and the other settlers did not complain. They were all poor, but they looked forward to having their own farms.

Wednesday, March 7, 1877, Bethlehem, Pennsylvania

After long talks about Kansas, I finally decided to go with Levin Brunner. I have drawn out of the bank all my savings, $75, and have bought my railroad ticket to Kansas, $23.05.

Monday, March 12, 1877, Osborne, Kansas

When we got off the train at Russell, Kansas, we had been on the road for 96 hours. We went to one of the two hotels, and slept well.

Saturday morning we found two drivers with a team and big wagon to take us to Osborne for $1 apiece. Osborne is two rows of houses on either side of a short street with the prairies coming right up to the back doors.

Mr. Jacob Schweitzer heard we were in town and came to see us on Sunday. He invited us to visit him and his family.

Monday, March 19, 1877, at Schweitzer's, Osborne, Kansas

We went to look at some land about two and one-half miles from town. Afterwards we walked to Schweitzer's. On the way, several men stopped to talk with us. Folks here are very sociable.

We talked with another man. He said he has always had enough to eat and clothes don't cost much here. A man in rags is as much respected as if he was dressed in expensive clothes. It's the man that counts here.

We'll stay at the Schweitzer's for the rest of the week. They are very hospitable people. Mr. Schweitzer says we should keep what little money we have as long as we can, for when we are out we can't tell when we will get more.

Mr. S. will take us Friday to Kill Creek to show us a place where Levin, Jim, and I can get claims together.

Thursday, March 22, at Schweitzer's, Osborne, Kansas

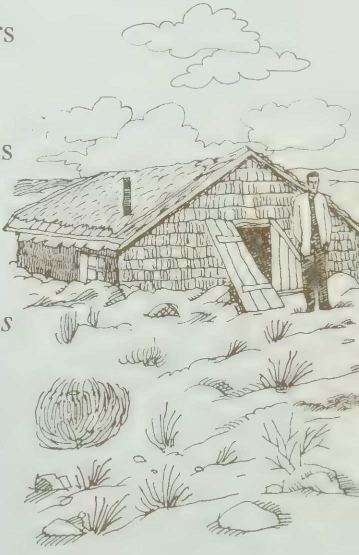
We found land which suited us well at Kill Creek.

We signed up for homesteads. We must live on our land for five years. The first two years we can live "off and on"; that is, we must sleep on it once in a while and make some improvements within six months, or we'll have to give it up. We can take other jobs by the day or month if we want.

Tuesday, March 27, 1877, at Snyder's, Kill Creek, Kansas

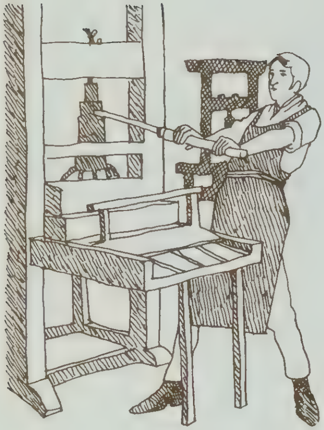
Levin has worked two days at the sawmill. Jim and I went to our claims. We hoped to catch a ride with a team to carry us across the ford at the South Fork River. No team was going our direction so we had to use our wits to get across the river. There was a big tree lying across the stream a short distance below the ford and a lot of driftwood was caught against it. We managed to cross there.

Snyder's will keep us for a few days. They have a sod house. It's plastered inside. The sod wall is about two feet thick at the ground and it is about 14 inches at the top. The roof is a ridgepole and rafters of rough split logs. Cornstalks are laid over the logs, and two layers of sod are over the cornstalks. The roof has a slight pitch so the sod does not wash off in a heavy rain. Sod is the only material the homesteader has at hand, unless he happens to be one of the lucky ones who got a creek claim with good trees on it.



Thursday, April 5, 1877, at Snyder's, Kill Creek, Kansas

A hot day. We did heavy work, laying the sod wall of the dugout. Just before sunset we got the ridgepole into place. The room will be about seven feet high. We expect to have the place ready to live in by the end of this week.



The trades are pretty well represented here. Snyder and Heiser are coopers. Rock was a pawnbroker in England. Smith was clerk in a store; Stevens a gas meter maker; Levin an engineer; and I, a printer.

Thursday, April 19, 1877, at the Dugout,
Kill Creek, Kansas

The start we have made here goes very slowly, but I think we will get ahead so that next spring we can begin farming and not have to work around at different jobs. Barnhart, the printer in Osborne, wants me to see him on Monday. That may mean a job.

Tuesday, April 24, 1877, at Schweitzer's,
Osborne, Kansas

Barnhart, the printer, wants me to work in his shop on Thursdays. Made a bargain to work for $1.75 a day, and I'll board myself. I'll stay at Schweitzer's every Wednesday night and get three meals for $.50.

Wednesday, May 2, 1877, at Schweitzer's,
Osborne, Kansas

Read Pa's letter by firelight. Imagine my surprise when I read that he will leave Pennsylvania for Kill Creek on May 14th.

I think Pa should bring medicines with him, as doctors are few and far between out here.

Bring your boots (all that are fit to wear) and shoe nails, for the prairie grass is awfully hard on soled leather. Bring some writing paper. Bring your pen. If you have cash, bring as much as possible. Then we can get some kind of team and get to breaking sod, so as to sow rye this fall.

Wednesday, May 30, 1877, at Morrow's, Osborne, Kansas

Henry Landes came into the office and asked me to work for him on his farm for six months at $12 a month. He will do eight acres of breaking for me and furnish me with meat, flour, etc., and the amount of $30 or $40 in cash.

Yesterday several of us went to a house which Henry Landes bought and which we were going to move here. It was a wooden house. It took us until noon to get one wagon under the house. We got the other wagon in position after dinner and started toward the place where Henry wanted the house placed. Suddenly John Sears said we'd better hop for shelter because a big storm was coming. When the worst was over, Henry came running to tell us that the house had been blown off the wagons and pieces of it were scattered all over the prairies.

Monday, June 4, 1877, Osborne, Kansas

People who live in sod houses, or any who live under a dirt roof, are pestered with swarms of bedbugs. Fleas are a bother here, too.

Sunday, July 1, 1877, at Landes's, Osborne, Kansas

All this past week we have been harvesting, and it has been hot! We wear straw hats, shirts, and overalls, no shoes or stockings. We have been using a Marsh harvester. It's much better than the other harvesters. Only two persons have to follow the machine and shock the grain, while the other machines drop the grain on the ground and need from four to six persons to do the binding.

Sunday, August 12, 1877, at Gsell's, Kill Creek, Kansas

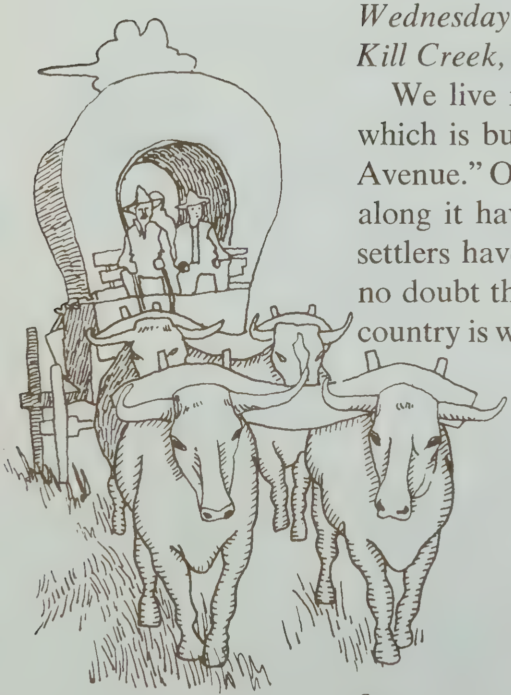
The hottest weather this week was 108° in the shade and 128° in the sun. Can you beat that?

Monday, September 10, 1877, at the Dugout, Kill Creek, Kansas

Last week, the County Supervisor asked me if I would care to give a day's work to road and other work in our area. I met the supervisor this morning at 8 o'clock. We chopped down a tree, moved several wheelbarrows of dirt, and then went down to the creek to fix a ford. The rest of the time before dinner we spent in getting out driftwood so as to lower the level of the stream. After dinner, we hauled stone to the road.

Wednesday, October 31, 1877, at the Dugout, Kill Creek, Kansas

We live in what Lish Gregory calls "Sod Town," which is built along both sides of "Pennsylvania Avenue." Our road is three miles long and all the people along it have come from Pennsylvania. Some of these settlers have lived in several other states. I have no doubt that many will go on farther west when this country is well settled.



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Charles Steen: Uranium Prospector

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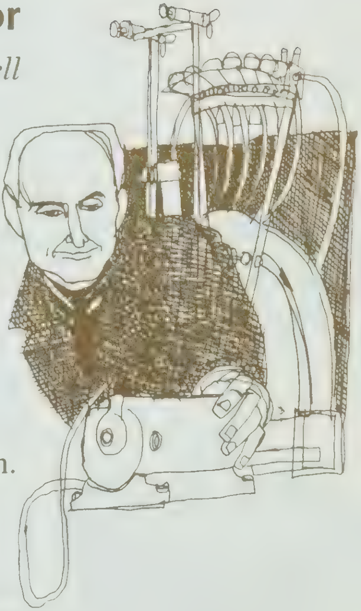
Charles Steen: Uranium Prospector

Ceanne Mitchell



"Gold!" That shout rang across America in 1849. Thousands of men joined the great gold rush. One hundred years later men were again hurrying westward. But this time the cry was "Uranium!"

Uranium is a heavy white metal. Some years ago scientists found that there was a kind of energy or force locked inside the uranium atoms.

Atoms are nature's building blocks. Everything is made of them. Energy is locked inside every atom. The scientists looked for ways to use this new source of power.

In 1939 an Italian scientist named Enrico Fermi thought he could find a way to release atomic energy from uranium. But he did not complete his experiment because war broke out in Europe. Italy was involved in the war, so Fermi came to the United States.

One great scientist, Albert Einstein, wrote a letter to the president of the United States. He said that atomic energy might make a new kind of bomb. It would be the most powerful bomb the world had ever seen. He warned the president that scientists in Germany were working on ways to release atomic energy.

The United States was threatened with war at that time. The president asked scientists to produce an atomic bomb. The scientists worked in secret for several years. In 1942 Fermi and other scientists produced the first chain reaction to release atomic energy. This was the first step toward making the bomb.

Early one morning, a group of scientists gathered in a lonely part of the New Mexico desert. A bomb was fastened to a tall metal tower. The men moved back ten miles from the bomb. They crouched in trenches to protect themselves from the explosion. They waited.

Then came the explosion. The tower disappeared completely. A giant ball of fire appeared, larger and brighter than any seen on earth before. The earth shook as a mighty roar swept across the desert. A tremendous mushroom-shaped cloud billowed high into the sky. Scientists had made the first atomic bomb. The year was 1945.

Before the atomic bomb, there were few uses for uranium. Now the United States government wanted lots of it. The government offered a high price for uranium ore and offered to pay a reward to anyone who discovered a large supply.

Some of the best uranium deposits in the country were located in the Four Corners Region.* Thousands of people swarmed into the area to search for uranium.

One of the prospectors was Charles Steen. He had a million-dollar dream. He was sure there was uranium in the Four Corners canyon country. And he was sure he could find it.

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*The Four Corners Region is an area around the point where Utah, Colorado, Arizona, and New Mexico meet.

In the little town of Moab, Utah, folks laughed at Steen's talk. The farmers and ranchers around Moab were not interested in mining. They did not welcome newcomers, especially those who spent time prospecting and talking about getting rich overnight.

Life was hard for the Steens during those years. Steen's wife, Minnie Lee, and their four young sons shared the long, hard years. Together, the family roamed the desert and canyons of Utah and Colorado in an old jeep and house trailer. They were searching for the million-dollar uranium mine of Steen's dreams.

When they ran out of money, they sold the house trailer and moved into a tumbledown shack near Moab. They had very little food. Steen owed so much money to the stores in Moab that he could get no more credit.

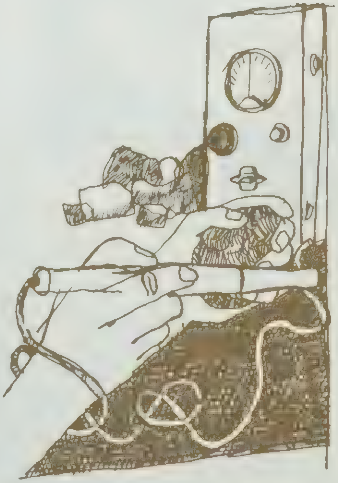
But Steen did not give up his dream. He had studied geology at the Texas College of Mines in El Paso. He thought he knew where to look for uranium. People laughed because Steen looked in places other geologists did not think uranium would be found.

But Steen followed his dream. He staked twelve claims to land south of Moab. He was sure the uranium was there.

Uranium prospectors often use a Geiger counter to test ore. A Geiger counter can detect uranium.

One day in 1952, as Steen checked some of his ore on a borrowed Geiger counter, the counter went wild. It showed the ore was full of uranium. Steen ran all the way to the shack to tell his wife.

After all those years of hard work and waiting, Minnie Lee couldn't believe it. But Steen was right. He kept his discovery a secret until he was sure that his



claims were safely recorded. Then he announced his find.

Suddenly Steen was rich beyond his wildest dreams. He had discovered the biggest uranium deposit ever found in North America.

For the little town of Moab, life would never be the same. As news of Steen's discovery spread, more prospectors hurried to the town. Then a uranium mill was built in Moab to prepare the ore from Steen's mine for market. Workers were needed to build and run the uranium mill.

More and more people came to Moab. Every house in town was filled. Trailers and tents sprang up everywhere. Soon there were more families living in tents, trailers, and shacks than in permanent homes.

The little town of Moab could not take care of all these people. There was not enough water for everyone's needs. The sewer lines were not large enough to carry away all the sewage. The schools could not handle all the children.

In these crowded conditions, people easily became angry with one another. They fought over claims. Newcomers were disappointed when their dreams of riches did not come true. Old-timers did not like the changes that came to their peaceful little town. It was not a happy time for Moab.

There were other small towns like Moab in the Four Corners Region. The uranium rush brought people, mines, and mills to many of these towns. In 1950, only 200 people worked in the 14 mines in southeast Utah. Seven years later, there were 1,600 workers in some 200 mines. The number of uranium mills jumped from one to four. The people who came to work in these mines and mills needed houses and stores and services. The little towns grew, and business was good.

Then things changed. The uranium rush had started because the government needed uranium to make atomic bombs. By 1958, the government had more uranium than it needed. The government stopped buying uranium. The rush was over.

The prospectors who had followed their dreams into the rough country of the Four Corners gave up the search. Most of them went home carrying only memories of hard work. Just a few of the prospectors—like Charles Steen—became rich.

Some of the uranium mines began to close. People began to move away. Many busy little towns suddenly became sleepy little towns. Hard times came.

In the meantime, scientists were hard at work. Many scientists wanted to use atomic energy for peaceful purposes. They dreamed about ways this new source of energy might help man.

Before long, scientists learned to make electricity from atomic energy. Some scientists believe that atomic power will take the place of other fuels—coal, oil, and gas. It will be used to run ships and airplanes. It could supply heat to homes, or whole cities. Atomic energy may make farming possible in regions that now are too cold for farming.

Some scientists are worried about atomic energy. They want to be sure that atomic power can be used without upsetting the balance of nature. And many questions about the effects of atomic energy on living things have not been answered.

Nonetheless, new atomic power plants are being built. These plants need uranium for fuel. Again, there is a market for uranium. Sleepy towns in the Four Corners are waking up. Uranium prospecting is helping them.

Uranium could bring good times back to the Four Corners. But prospectors like Charles Steen will not be back. A new kind of prospecting has begun. The people of the Four Corners watch the new prospectors fly overhead in airplanes. Powerful drills dig deep into the ground.

But the exciting days of the old uranium rush will not be forgotten. They will be remembered whenever men tell the story of Charles Steen's uranium mine.

Social Science Satellite Kit

REGIONS OF THE UNITED STATES

Coal Mining

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Coal Mining

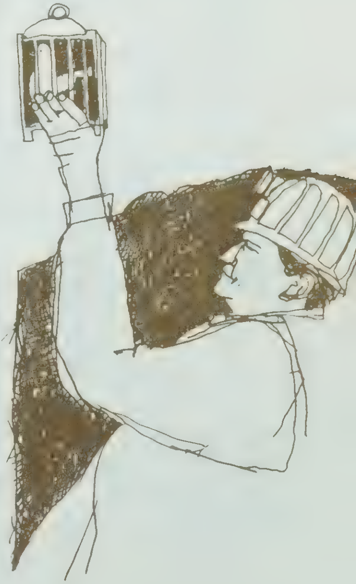
Billy Murray

There are coal miners working today who remember when men went into the mines and dug the coal loose with picks and shovels. It took great strength to work as they did all day. It took courage, too. They had to enter the darkness deep underground with only a dim light to show the way. Only wooden posts kept the roof of the mine from falling in on the miners. Often the posts were not strong enough. Then tons of earth fell in and crushed everything under them.

Miners tell of rats that once lived in the mines. The miners liked the rats. They fed them scraps of food from their lunch buckets. According to the miners, the rats somehow knew when it was not safe to be in the mine. When the rats began to leave, the miners left too.

The miners also used canaries to warn them of danger. They carried the birds in cages through the mines. If a canary collapsed, the miners knew the air was unsafe, and they left the mine at once.

Today the miners do not have to depend on rats and canaries, dim light and rotting timbers. Modern elevators rapidly whisk miners through thousands of feet of earth. Bright lights and up-to-date ventilation systems



protect the miners from many hazards. Even so, coal mining still can be very dangerous.

Let's see how coal is mined today. One mine might be about eight miles long. The farthest point inside the mine is called the *face*. The face is where the coal is being dug. The mine may be from 90 to 300 feet beneath the surface of the ground. The land is hilly, and the coal lies in a layer like a blanket under these hills.

Shafts, or openings, are dug down into the mine. These are used to bring in fresh air from the outside. They range from 24 feet in depth to nearly 300 feet. The layer of coal is about five feet thick in the area being mined. Above the main roof of the mine is a layer of limestone.

The first six miles of the mine are like a tunnel on a highway. Wire screen has been put on the roof and sides. It is covered with a smooth surface of concrete. This makes the roof and sides stronger and safer.

About six miles in is the entrance to the digging area. Here are the showers and locker rooms for the men. Here they keep their equipment such as lights, batteries, belts, and hats. The superintendent and other office workers have their offices here.

There is also a first-aid room. An elevator like those used in large buildings carries the men 90 feet down to the mine. There they board "mantrip" cars which take them to the working area of the mine.

Coal mining is not a hit-or-miss operation. Engineers have mapped the underground mine. They know exactly where the coal is.

The map of a mine is like the map of a small city. The main avenues are the routes used to carry coal to the outside. The streets are connected to the avenues. They are used to transport coal from the area being mined to the main line, or avenue. The area being mined is like the houses located in a city block. It is not possible to take all the coal from an area. So ribs of coal are left standing. They look like yards around the houses.

Once an area has been mined, it is sealed off except for the main avenues. It is sealed off with cement block walls. This keeps the stale air out of new mining areas, and it helps channel the good air to where men are working.

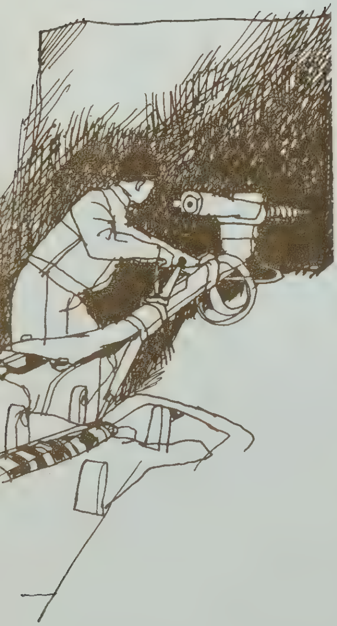
Fresh air is pushed into the mine by large fans on the surface. This air is constantly checked by the boss in each part of the mine. He carries a lamp which has a small flame inside. He can easily tell if the air is normal. If the lamp goes out, it means that there is not enough oxygen to keep it burning. It also means that the air doesn't have enough oxygen for men to breathe. If there is too much gas in the air, the flame changes color, becomes brighter, or grows large.

All men must wear safety equipment. They wear hard hats, built to keep them from being hurt by falling rock. The hats also protect men if they hit their heads on a low part of the roof. Each hat holds a light; it gets its power from a battery carried in the miner's heavy leather belt.

Elastic leg bands keep pant legs away from moving machinery, and they keep out some of the coal dust. Men wear steel-toed shoes to protect their feet. They wear gloves to protect their hands. They wear respirators (oxygen masks) so that they can breathe when the air is full of dust.

Miners can contact each other in the mine by radio. Even if the electricity fails, the men can still talk to one another. There are also telephones in the mines. Groups of men work in different sections of the mine at the same time, and these sections may be several miles apart. Fourteen men work in each section, and each section is divided into eight rooms. A room is about nine by fifteen feet in size.

The first man who goes into a room is the bolter. His job is to drill holes in the roof. Then he places bolts in these holes. These bolts are about one inch thick and from six to ten feet long. They are scattered over the entire area of the roof, but never more than four feet apart. They are used to keep the roof from collapsing. Posts for support are no longer needed. Without posts, machines can move about more easily in the mine.



After the bolter has finished and moved to the next room, the cutting machine is brought in. This looks like an oversized chain saw. The man who runs the machine cuts out an area about a foot from the floor level. He cuts about nine feet deep into the coal. He also cuts a path nine feet deep from the roof to the floor. This is done to get ready for the blasting. Then the cutting machine follows the bolter to the next room in that section.

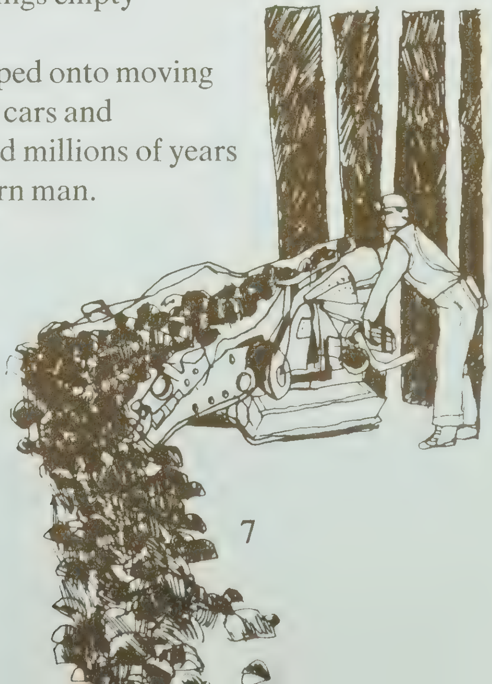
The drilling machine now enters. The driller drills holes near the roof and down the sides into the face of the coal.

The next man to enter is called the *shot-fire*. He places dynamite in the drilled holes. The shot-fire warns the other miners to get out of the area before it is blasted. He shouts, "Fire in the hole!" He repeats it in fifteen seconds. He waits another fifteen seconds and shouts it again. He waits another fifteen seconds and then sets off the blast. Then come the shocks which jar the coal loose. The explosion is terrific. But miners say that it is really very safe.

After the coal is "shot," the loading machine enters. This machine looks like a frightening animal that lived millions of years ago. It has two arms on the front that gobble up the coal, and then it forces the coal onto a moving belt running through its middle.

Two buggies work with the loading machine. While one is being loaded, the other hauls coal to cars waiting to be filled. There are fifteen or twenty of these cars in a group, coupled together like railroad cars. They are pulled by an electric locomotive and taken outside. Once the cars are loaded, a pickup motorman moves them out to the main line of the mine and brings empty cars back.

Coal coming out of the mine is dumped onto moving belts which carry it to waiting railroad cars and barges. And so this black energy, stored millions of years ago, is used to serve the needs of modern man.



Social Science Satellite Kit

REGIONS OF THE UNITED STATES

Listening for Oil

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Listening for Oil

Francis L. Fugate

When Jay Miller was a little boy he lived in El Paso, Texas. His father's work was looking for oil. His father also owned a cattle ranch about 125 miles from town. On holidays, Jay loved to go to the ranch with his father.

One summer day, he was out on the ranch walking with his father. They were trying to see who could find the most jackrabbits. Jay was one rabbit behind. They came to a hole in the ground. Jay said, "Daddy, do you think there's a rabbit in that hole?"

"There might be, Jay," replied his father. "But I would much rather find oil down there."

Jay didn't like his father to go away to hunt oil. He was always gone for so long.

By the time Jay got to high school, he knew one reason oil was so valuable. Gasoline for cars was made from it. Jay liked cars very much. He decided that when he grew up he would look for oil too. He wanted to make sure that there would be enough oil for all the cars.

One day Jay's teacher told him that gasoline could be made from cornstalks. Right away, Jay decided to make some. That night, he cut up some cornstalks. He was boiling them on the stove when his mother came in. She took one look and cried, "John William Miller!"

(She always called him by his full name when she was angry.) "Why are you making that mess on my stove?"

Jay spoke up. "I want to show Daddy that he needn't worry if he can't find any more oil. Our teacher told us we could make some out of cornstalks."

When his father came in, he laughed. "That's right, son. You can make gas out of cornstalks. But I'm afraid it would take an awful lot of corn. We can't grow enough to keep all our cars running."

"How do you find oil?" asked Jay. "Wait until school is out," replied his father. "Then I'll take you out to an oil patch and show you."

Jay could hardly wait. Finally the day came. "Get your jeans and boots packed, son," said his father. "We leave for the oil patch in the morning. We'll make a jug hustler out of you."

"What's a jug hustler?" asked Jay.

"Just wait and see," said his father.

Next day, they traveled to the place where his father's company was exploring for oil. There were lots of men and trucks. Some men were drilling holes in the ground. Others strung wire from the trucks to the holes. There were lots of silvery square things with wire attached to them.

Jay saw some drinking-water jugs by the truck. That was it. A jug hustler must be the one who carried water to the men. Just then his father pointed to the pile of silvery things.

"Take some of those," he said. "Take them over to those men stringing wire."

"But, Daddy," Jay said, "I thought I was the jug hustler."

He picked up three of the silvery things. They were as heavy as lead. After his second trip he asked his father, "What are those things?"

"Son, you are a jug hustler now. Those are called *jugs*."

"What are they for?"

"They are geophones," his father explained. "*Geo* means earth. We use them to listen to the earth. We are going to measure earthquakes with them."

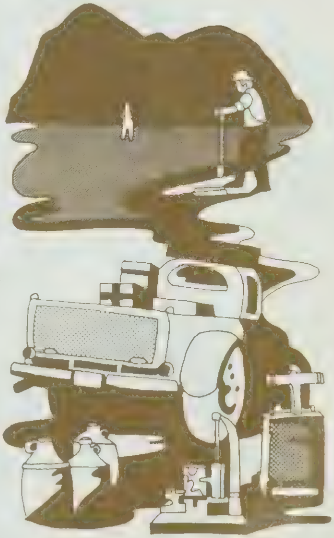
"What earthquakes?" asked Jay, feeling very uneasy. Maybe that was why everyone was hurrying so. Was there really going to be an earthquake?

His father pointed to some other men. They were carefully pushing something down into the ground. "They are putting dynamite in those holes," said his father.

"What for?" asked Jay.

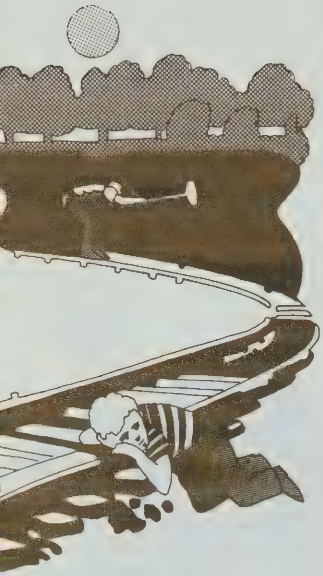
"So they can make a little earthquake," answered his father. "That's how we look for oil." Jay decided to stay close to his father. Soon someone on one of the trucks honked a horn. Everybody stood quite still.

"Don't move," Jay's father ordered. Suddenly there was a loud boom. Clouds of dirt and smoke shot into the air from the holes in the ground.



Before the next explosion was set off, Jay's father took him to the truck. He pointed to many little pens that were held by wires over a long sheet of paper.

He explained that when the dynamite went off, the shock waves went down into the ground. They bounced off the rock formations down there. Then they bounced back up to the jugs. This made the pens jump. In this way, men can tell how far down a layer of oil is located.



Just then the horn honked. Jay stood still. Suddenly the pens jumped. Lines on the paper shot up, then down. Then Jay heard the rumble of a giant explosion. He looked out to see dust shooting out of the holes.

"Daddy," he cried, "the pens jumped before the explosion went off."

"No, Jay," replied his father. "The explosion made the pens jump. But we didn't hear the noise of the explosion until later. You see, sound travels slower in the air than it does in the ground. Let me show you."

He took a sledgehammer and went to an old railroad track nearby. He showed Jay how to put his ear against the rail to listen. Then he went down the track. Jay watched his father hit the track with the big hammer. Almost at once Jay heard the noise come through the track. He sat up to wave, and only then did he hear the ringing sound as it came through the air.

Jay's father explained that sound travels at different speeds through the ground. Its speed depends on what kinds of rock and soil are there. Men know how long it takes sound to travel through oil-bearing rock. By listening, they can map the rock layers underneath. This helps tell them where to drill for oil.

After Jay graduated from high school, he wanted to try to find oil. His father sent him to the College of Mines and Metallurgy in El Paso. There he learned a lot more about sound. He learned more about how to look for oil.

It was 1941, and Jay was 18 years old. That year Japan attacked the United States at Pearl Harbor. Jay wanted to go on learning about oil. But he also wanted to help his country. He decided to join the navy.

After the war he went to Rice University, in Houston, Texas. When he graduated, he went to work for an oil company. Then he started making the machines that record the earthquakes caused by explosions of dynamite. Jay thought he could make a new and better machine to do the job. But the company did not want a different machine.

In 1953, Jay met with some men. He told them that he could make machines that would help them find oil more quickly.

The men believed Jay. They helped him borrow the money he needed. They formed a company called Globe Exploration. Jay made the machines, and, sure enough, the company found oil! Jay's instruments and machines were better than what had been used. The men made him president of Globe Exploration.

Jay now had to look for oil in more places. He learned to fly an airplane to get from place to place faster. His company got bigger. In 1964, he went to El Paso to start a branch office. There he met his former physics teacher, Thomas G. Barnes. Barnes was interested in using sound to find out about the weather.

"Jay," he said, "we send rockets up in the air with dynamite in them. When the rockets get high up in the air, the dynamite explodes. We can tell how cold it is up there by recording how long it takes the sound to reach the ground."

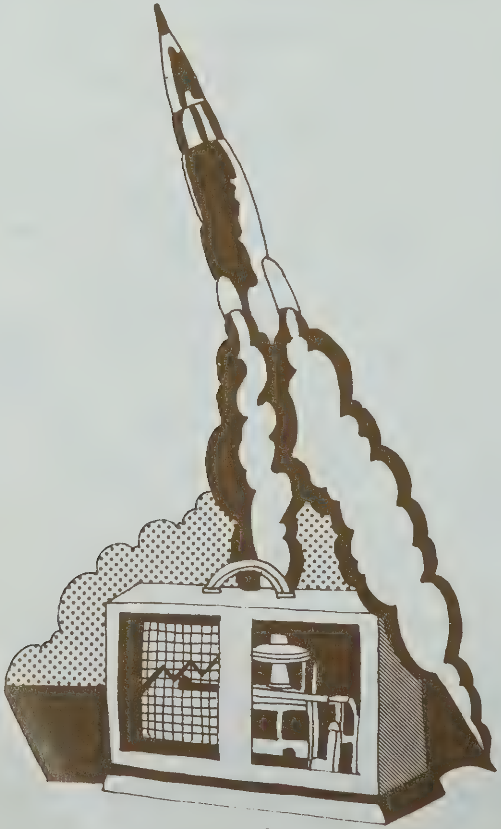
Jay asked Thomas Barnes to work for his company. Barnes said he would like that.

They changed the company's name to Globe Universal Sciences. They also got a contract to do work for the National Aeronautics and Space Administration

(NASA). They launched rockets from Point Barrow, Alaska. This is the part of the United States that is closest to the North Pole. They wanted to find out when the jet streams of wind start to change direction.

Jay now has a little boy. Jay remembers how much he enjoyed walking and riding horseback around his father's ranch. So he bought a ranch in New Mexico for his little boy.

Now little Jay rides the ranch with his father looking for jackrabbits—that is, when his father is not out using sound to search for oil or to learn about the weather.



Social Science Satellite Kit

REGIONS OF THE UNITED STATES

Exploring a Region

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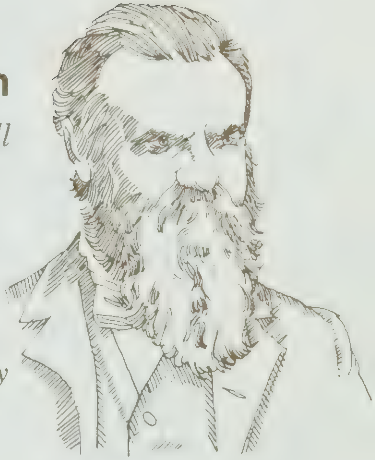
Adapted from *Canyons of the Colorado* by John W. Powell, first published 1895. Reprinted and published, New York: Argosy-Antiquarian, Ltd., 1964.

Exploring a Region

J. W. Powell



This story is based on the diary of Major John Wesley Powell. He was a scientist, explorer, and government official.

Powell was born in 1834. He grew up on a farm in Ohio. He went to a small country school and became very interested in science. His parents helped by sending him to private science classes taught by a neighbor.

Powell became very interested in studying about different kinds of rocks. Rocks show how different landforms like mountains and valleys were made. This is the science of geology. *Eventually, Powell became a science teacher.*

When the Civil War began, Powell enlisted. He rose to the rank of major. In one battle, he lost his right arm. But he was determined not to let this keep him from doing the things he wanted to do.

After the war, Powell became interested in exploring the unknown rivers and canyons of the West. He organized the trip described in this story. Later, he took an even longer journey through the Grand Canyon area. He made maps and wrote descriptions of lands that had never been explored before.

Powell's journeys made him famous. He went to Washington, D.C., to work for the federal government.

He had ideas for irrigating the dry western lands. He had ideas for helping the Indians who had been driven from their homes. He tried to improve life in the West. But he is best known for his exciting exploring trips.

On May 24, 1869, ten men set out on a trip. They knew it would be dangerous. They would travel a swift, wild river through strange and beautiful land.

The men began their trip at Green River City, Wyoming. From there they would go down the Green River to where it joins the Grand River. These waters flow together to form the mighty Colorado.

Much of the Colorado River was unknown. It was wild. It was dangerous. Tales were told of Indians being drawn into the river's whirlpools, never to be seen again. It was also said that the river flowed into great caves where men were lost forever.

Probably the most dangerous area of the river was the Grand Canyon. Men had explored the Colorado River. But none of these men had lived to tell about it.

Major John Wesley Powell was the leader of the ten men in 1869. Major Powell was a scientist. He wanted to know more about the Colorado. He wanted to make a map of it and the region around it. Major Powell wanted to study the rocks and the earth forms along the river. He also wanted to learn more about the Indians in that part of the country.

Four small boats had been built especially for the trip. Each was 21 feet long. Each had three parts. The front and the back parts were watertight. If the boats turned over, they would not sink.

The men carried food, clothing, guns, ammunition, and traps. They also brought tools for building cabins and repairing boats, as well as some scientific tools. They had enough supplies for ten months.

Whenever the men stopped to camp, they observed the land and made notes. They measured the heights of the cliffs. They studied the plants that grew nearby. They described the birds and animals they saw. Major Powell studied the different kinds of rocks. He looked for ancient Indian ruins.

Sometimes the men traveled swiftly down the river, covering many miles each day. On other days they had to unload their boats and carry everything around waterfalls. Sometimes they had to lift the boats over the falls with ropes. They traveled slowly then.

Six days after leaving Green River City, the explorers entered their first canyon. They named it Flaming Gorge.

A few days later, on June 9, the explorers came to another canyon. In some places, the walls were 2,000 feet high. They named this canyon Lodore. Here they saw great forests of pine, fir, and cedar on the mountain slopes. Sometimes the trees grew all the way to the river's edge. Soft mosses covered the canyon wall wherever there was enough moisture for growth.

Suddenly, Major Powell saw a waterfall ahead. He pointed the way the boats should go. Then one boat plunged over the falls. The two men in the boat lost their oars and were helpless as the boat spun and whirled in the waves. It smashed against a boulder and broke in two. The men were thrown into the river. Both got to shore. They were bruised but safe. The

other boats followed safely over the falls.

On July 2, the explorers made camp where the White River flows into the Green River. Most of the land there was dry rock cliffs and drifting sand. Major Powell visited an Indian village in a nearby valley. Among the little farms, he found the ruins of houses where Indians had lived long ago. No one knew who these ancient tribes were.

A few days later, on July 8, Major Powell and one of the men climbed 2,000 feet above the river. Still, they did not reach the top of the canyon walls. There were canyons all around them.

More than a month later, Major Powell wrote:

"We are now ready to start on our way down the Great Unknown [the Grand Canyon]. We are three quarters of a mile deep in the earth. The great river seems small as it dashes its angry waves against the walls and cliffs that rise to the world above. We seem like dwarfs bobbing up and down among the boulders. We are eager but we are worried too. What will the falls be like? How high will the canyon walls be?

"The canyon is narrower than we have ever seen before; the water is swifter. The walls on both sides have polished towers. The river is filled with boulders that have washed down from a side stream. The boulders form a dam. We have to carry our boats past the dam.

"About 11 o'clock we hear a great roar ahead. We see great rocks jutting out of the river. The water falls about 80 feet in less than a half mile. The waves have white foam on them. The canyon walls go straight down into the water. There is no way to carry our boats past these falls. We must either leave the river or run through these rapids."

Slapped and dashed and whirled by the water, the boats went over the falls. The men could hardly believe it when they were safely below.

At this place the tops of the canyon rose up a mile above the river. The gorge was black and narrow. The cliffs above were red and gray. Side canyons opened off the main gorge. Once over another falls, the party found a little gravel beach. There they camped. It rained hard all that night. There was no shelter for the men.

The next day, they moved ahead slowly. They used ropes to hold the boats. They pulled them to one side or the other. They lifted them, always trying to hold them away from the rocks.

The river ran very deep through the narrow canyon. The rushing water broke high as it beat on the rocks. The boats were thrown from one side of the river to the other. Sometimes they shot straight into midstream. Sometimes they spun about as they were caught in the whirlpools.

The food supply was getting low. Some of it had been lost overboard. Much of the meat had spoiled. Major Powell knew that if they didn't come to the end of their journey soon, they would have to give up and try to reach settlements to the north.

August 21 was a wild, exciting day for the explorers. They rode down the speeding river as it rushed through a very narrow canyon. Their boats leaped over falls. They twisted to the right and to the left. The men were so filled with excitement that they almost forgot the danger. When the morning was over, they came to softer limestone rock. They thought that the way ahead would be easier.

Then the explorers came upon a very strange sight. Standing in the river were great black monuments. They were made of lava from an ancient volcano. Some were a hundred feet high. On each side of the river, there were cones of cinder. They saw the crater of an old volcano. How the waters must have boiled! What clouds of steam must have rolled up to the heavens!

On August 27, Captain Howland and two others decided not to go on. They believed that Major Powell should give up the trip. There seemed to be no way to get safely through the plunging, leaping water of the canyon.

Major Powell believed that they must be near the end of their journey. He would not give up. Six men stayed with him.

It was a sad parting. They divided the supplies. Then, Captain Howland's party started their climb out of the canyon. Each group thought that the other had made the more dangerous choice.

Only two days later, Major Powell and his men came out of the Grand Canyon. They were in a valley with low mountains in the distance. This part of the river had been explored before. The danger and the hard work were over. Major Powell's journey was successful.

Captain Howland, and the two men who left with him, did not fare so well. Before they could reach safety, they were killed by Indians.

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New York Harbor and the Port Authority

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New York Harbor and the Port Authority

Fred Amann

A majestic lady keeps her eye on the United States. Each year she watches about 2,600 ships come and go. In their holds they carry goods from faraway places. These goods appear on our tables, in our closets, and in many stores.

She also watches a million travelers come into the harbor. They come to visit or to start new lives in the United States. Can you guess who the lady is, and what harbor she watches over? Yes, it is the Statue of Liberty standing in the harbor of New York City.

New York City today is the world trading center of the United States. In 1968, New York Harbor handled more than 14 million tons of cargo. This cargo was worth $212 million. Most of the Port of New York lies along the Hudson River. On one side of the river is the state of New Jersey. On the other side is the state of New York. Some years ago, these two states began to fight over who owned the Port of New York. Each state tried to get ships to use its side of the river. Everyone was very confused. There was so much fighting that many ships decided to use other ports.

When the states of New York and New Jersey saw that ships were using other ports, they got worried. They decided to quit fighting. They decided to cooperate so that ships would come back to New York Harbor. They formed the Port of New York Authority.

An authority is an organization that takes over a job that a city or a state or a government does not have time to do itself. The governments give some of their power to the authority so that it can do the job. The states of New York and New Jersey each appoint six men to make sure the Port Authority does its job. These twelve men are called the Board of Commissioners.

The two states told the Port of New York Authority that its job was to encourage ships to use New York Harbor again. The Port Authority began by building modern facilities for ships. It built warehouses to store goods.

Later it built bridges and expanded airports so that goods could travel faster between the port and other parts of the country and the world.

In all, one-fourth of the people working in New York City have jobs that help cargo go in and out of New York Harbor. They are lawyers, engineers, warehouse keepers, freight forwarders, bankers, government officials, longshoremen, and many others. They all work together to make sure the goods go where they are needed as fast as possible.

So you can see that a harbor is more than a good place to dock a ship. A harbor needs people with many different skills, or the ship would never get loaded or unloaded.

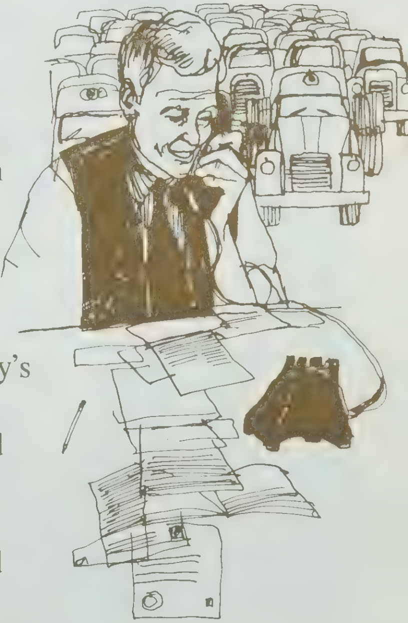
Let's take the story of Mr. White. Mr. White is manager of a Ford truck plant in Mahway, New Jersey. He has just received an order for 200 trucks from Mr. Lopez in Buenos Aires, Argentina.

Mr. White checks to make sure he has enough trucks to ship to Argentina. Then Mr. White calls Mr. Jones. Mr. Jones is a freight forwarder. The job of a freight forwarder is to make sure that goods travel as fast and cheaply as possible. He must make sure that the goods get to the ship on time. He must see that all the papers are properly signed.

Mr. Jones calls several shipping firms to find out how much they will charge to carry the trucks to Buenos Aires. He finds out that South American lines offer the cheapest price.

Mr. Jones finds out that a ship will set out for Buenos Aires in two weeks. He must work fast to get everything ready on time.

He calls several railroads to find out which will charge the lowest rate to deliver the trucks to Port Newark, the port on the New Jersey side of New York Harbor. He finds that the Erie-Lackawanna is the only railroad that has enough boxcars available, even though its rates are slightly higher.



Mr. Jones also calls the Argentinian consul, Mr. García, in New York City to get a permit to ship the trucks to Buenos Aires. A consul is a person who represents a foreign country. He looks after his country's interests in other countries. Almost every country of the world has a consul in New York City. The United States also has a consul in almost every country of the world.

Mr. Jones wires Mr. Lopez in Buenos Aires to find out where his warehouse is and if it has enough room for the trucks. They will be stored in the warehouse after landing.

Mr. Jones calls the Sea Insurance Company. He buys insurance just in case something should happen to the trucks on their trip.

Then Mr. Jones calls Mr. White to tell him everything is all right. Mr. White looks at his bankbook. He decides he doesn't have enough money. He must pay for his workers, Mr. Jones's services, the insurance, the train, and the ship. He takes Mr. Lopez's letter promising to buy his trucks to his banker, Mr. Green. He asks Mr. Green to lend him enough money until Mr. Lopez sends him the money for the trucks. Mr. Green agrees to lend him the money.

Is everything now ready to go? No, one more thing must be done. Mr. Jones must fill out a piece of paper that tells the whole story. This piece of paper is called a *bill of lading*. It tells how many trucks Mr. White is selling to Mr. Lopez. The paper tells what train will move the trucks to Port Newark. It tells where the trucks will be stored and which ship will carry them to Buenos Aires. The paper tells which warehouse will store the trucks when they arrive in Buenos Aires.

The paper also tells how much the trucks are insured for. It also tells what permit number the Argentinian consul, Mr. García, gave the trucks.

Mr. Jones sends a copy to everyone so that they can keep track of the trucks. Now, everything is in order. The trucks are loaded aboard the ship, and it begins its journey.

After four weeks at sea, the ship passes into the harbor at Buenos Aires. Longshoremen come to drive the trucks off the ship. First, the trucks are inspected by

Argentinian customs officials. Then, the trucks are loaded on a train and taken to Mr. Lopez's warehouse. The manager of the warehouse calls Mr. Lopez to let him know that the trucks have arrived. Mr. Lopez comes to the warehouse to make sure the trucks are still in good condition. After he inspects them, he goes to his bank. His banker sends a special check to Mr. White to pay him for the trucks.

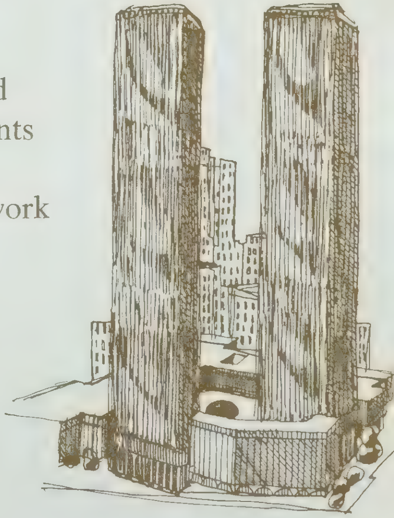
Then Mr. Lopez calls his drivers, and they drive the trucks to several sales lots where the trucks are sold.

It is important that goods move in and out of the port as fast as possible. Room must be made for new goods coming in.

In order to help everybody save time, the Port of New York Authority has built the World Trade Center. The Center houses many different kinds of businesses. All of them are involved in foreign trade. There are shipping companies, trucking companies, railroad companies, freight forwarders, insurance agents. There are bankers, exporters, importers, consuls, and government agencies. The next time Mr. White wants to ship trucks to Buenos Aires, he and Mr. Jones will save a lot of time. All the people they need to work with will be in the same building.

About 50,000 people work in the two 110-story buildings that make up the center. Every day, almost 80,000 visitors come to the center.

Also located in the center is a computerized information center. Here, all the information about ships and cargoes going in and out of the port is recorded.



There is information about all the businesses in the center. In the lobby, a large panel is connected to the computer. For example, if you want to know how many shipping companies had ships going to Kenya, you would press a certain button. In a few minutes you would get a list telling you the names of the companies and how to get in touch with them.

The trade center opened in 1972, and is the newest of many improvements that have made the Port of New York the front door of the nation.

Social Science Satellite Kit

REGIONS OF THE UNITED STATES

Who Owns the Colorado?

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Who Owns the Colorado?

Dorothy Senesh

"The Colorado River begins in this state," says a man in Colorado. "The river water belongs to us."

"No," declares a woman from Wyoming. "Snow and rain from the mountains of Wyoming help to fill the river with water. This is our water."

A Navaho Indian in New Mexico says, "My people used the water of the Colorado River before the white men came. This water is ours."

A farmer in Utah declares, "The Colorado River helps me grow food for all the people of the United States. I would have no farm without water from the Colorado River."

"My ranch is beside the river," replies a rancher in Nevada, "so the water belongs to me."

"The people of Los Angeles have been using water from the Colorado River for years," says a man in California. "We have a right to go on using that water."

Arguments like these have been heard all over the West for many years.

Why have there been so many arguments? The land in the Colorado River Basin is very dry. There is little rain and not much underground water. Men cannot have homes and cities and farms and factories without

water. So they all depend on the Colorado River. But there is hardly enough water to go around. So people argue. Who should use the water? How much should each state use?

In 1965, Congress appointed a group of men to study the problems of the Colorado River Basin. What should they do about dividing the water? The committee listened to people from all states in the basin. Each state had a different idea about what the government should do.

The states of Colorado, Wyoming, Utah, and New Mexico were closest to the river's source. They wanted the government to help build dams on the upper river. This would keep more water in the upper river. These states would have more water.

But states down the river didn't like this idea. They knew that dams upriver would cut off their supply of water. States like Arizona, Nevada, and California wanted the dams built farther down the river. Arizona also wanted the government to build an aqueduct. The aqueduct would carry the water from the Colorado for hundreds of miles into the dry land of Arizona.

California already was taking water from the Colorado River through a long aqueduct. This aqueduct led to the city of Los Angeles. Other parts of southern California were using water from the Colorado River. California and Arizona were afraid that in a dry year there would not be enough water left in the river. California wanted the United States government to promise that there would always be enough water left for California.

"There is just not enough water in the Colorado River Basin," declared people from many states. "We must find more water."

Everyone finally realized that there was just not enough water in the basin. Some people then asked that water be brought to the Colorado Basin from the Columbia River Basin in the Northwest. "After all," said one man, "people in the Columbia Basin have more water than they need."

This upset people in the Northwest states. "Our cities and factories are growing too," they said. "Soon we will need all our water. If you take water from our river basin, there may not be enough left for us."

Now people from other parts of the United States jumped into the argument. Nature lovers were worried when they heard about plans to build two big dams near the Grand Canyon. They knew the dams would make lakes. They might flood parts of the Colorado River canyons. The beauty of the wilderness was more important to nature lovers than the dams.

"Save the Grand Canyon," they cried. "Men have no right to destroy what nature took millions of years to create."

Others replied that the dams would make electricity. "Men need electricity more than a pretty landscape," they said. Angry men argued back and forth in front of the committee from Congress. The committee listened to hundreds of people. It read thousands of pages of reports and letters. The committee wondered, What should Congress do? There was no way to please everyone.

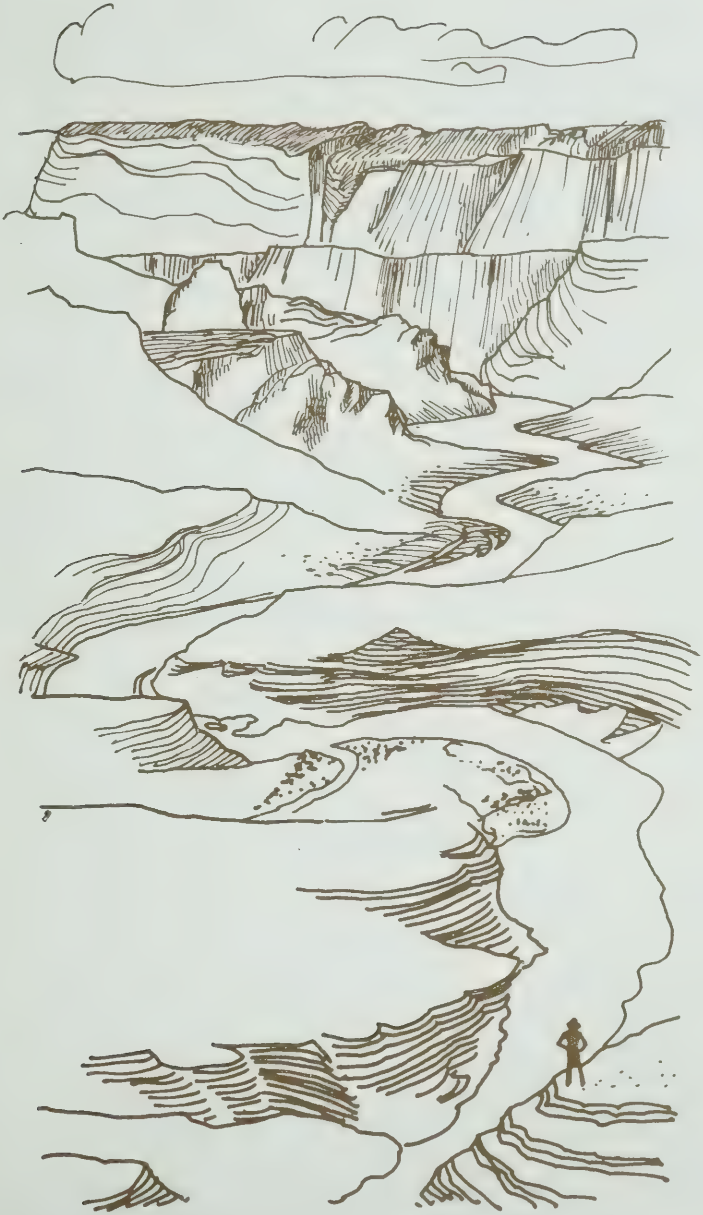
In 1968, Congress made a new law for the Colorado Basin. The new law was a compromise. Each group got some things it wanted. No group got all the things it wanted.

Dams and aqueducts will be built in Arizona. This will give more water to dry parts of the state. But the two big dams near the Grand Canyon will not be built. Some new dams and new rules will keep water in the upper river. California and New Mexico are promised their share of water, even in dry years. The Northwest states are promised that no water will be taken from the Columbia River Basin for at least ten years.

The new law settled some of the arguments for a while. But the new law did not solve the problem. The people of the Colorado River Basin still need more water than nature provides. In a dry year, there may not be enough water to go around. Soon there will not be enough water for cities, farms, and factories to grow.

Where will the people of the Basin find the water they need? Maybe scientists will find an answer. They are looking for better ways to clean water so that it can be used over and over again. They search for better ways to turn salty ocean water into good drinking water. Soon men may be able to change the weather to make more rain fall. Better aqueducts can be built to carry water long distances.

There are new ways of getting water. But how much will they cost? A way must be found to bring lots of water to the Colorado Basin at a low cost. Only then will people stop arguing over the water of the Colorado River.



Social Science Satellite Kit

REGIONS OF THE UNITED STATES

Chicago: Rail and Air Center

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Chicago: Rail and Air Center

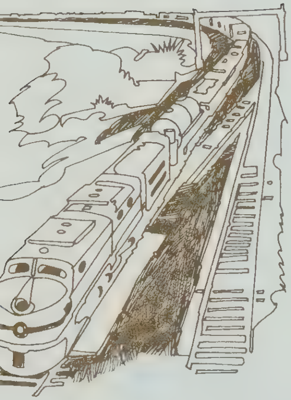
Charles J. Lewis

Many railroad companies have the word *Chicago* in their name. You may have heard of some of them: Chicago and North Western Railway; Chicago, South Shore, and South Bend Railroad; Chicago, Rock Island and Pacific; Chicago, Milwaukee, St. Paul and Pacific.

Why do so many railroads have *Chicago* in their names? Because Chicago used to be the world's busiest rail center. No one could take a train from coast to coast without changing trains in Chicago. There were twelve railroad stations in the city. Most passengers had to go from one station to another to change trains and continue on their journey.

In the 1950s more people began to take airplanes instead of trains when they went on trips. Businessmen decided that air travel saved time for them. Vacationers thought they could spend more time at their destination by taking a plane.

At the same time that people decided to take planes rather than trains, the railroads decided that they didn't want to carry passengers. They found they could make more money carrying freight than passengers. They cut down on passenger service. This made more people take airplanes. The railroads cut down on passenger service even more. Finally, in 1971, Congress gave a new company called Amtrak the job of running all rail passenger service in the United States. Amtrak took over the equipment of many different railroads. It cut out passenger service to some areas of the country. It reduced the number of trains running to other parts. Many people were unhappy because they no longer could travel by train to places they wanted to go. But other people said that Amtrak was trying hard to give passengers better service. They said that Amtrak had many problems. It had to use both old and new cars from other railroads. It also had to use the tracks of other railroads. Sometimes Amtrak trains had to wait for freight trains to go by. It could give better service if it could afford new equipment and its own tracks.



What effect did Amtrak have on Chicago as a rail center? It cut down the number of passenger trains going into and leaving Chicago. It also cut out the number of railroad stations used. Now all Amtrak trains leave from Union Station. Passengers do not have to change stations when they go from coast to coast by train. But sometimes they don't save time. Their trains may have to wait a long time in the rail yards because there aren't enough tracks going into the station.

Chicago is not as busy a rail center for passenger trains as it once was. But it is still a busy center for freight trains. Great switching yards surround the center of the city like a web. Boxcars often begin their journey on one railroad and must be switched to another railroad in Chicago.

Cooperation among the railroads is necessary. Cars must be switched in time to meet the schedules of trains leaving the city. If freight is late, the railroads' customers get poor service. Trying to meet schedules is a difficult job. It goes on twenty-four hours a day, seven days a week, in all kinds of weather.

Railroad people in Chicago know that shippers could bypass Chicago. There are two other rail junctions at St. Louis, Missouri, and Peoria, Illinois. Goods could be routed through these places. If the Chicago junction gives poor service, Chicago will lose business to those cities. So Chicago railroads try to move freight as quickly as possible.

The railroads must compete with truckers. Trucks can go faster. They can go wherever there are roads. Trains can travel only where there are tracks. There are more roads than railroad tracks. To face this competition, railroads had to improve their services.

One of the ways they did this was to start the piggyback. A truck pulls a trailer to the railroad track. Then the trailer is placed on a flatcar and is carried piggyback as railroad freight. This permits cargo to be delivered or picked up at places far from railroads. When the train reaches its destination, the trailer can be unloaded from the flatcar, hitched to another truck, and driven directly to a factory or store.

The railroads must keep up with changing times. They are an important part of Chicago's economy and the economy of the entire United States.

As Chicago declined as a center for rail passengers, it became an important air center. In the 1950s Midway Airport became the world's busiest airport. But when jets came into use, Chicago had a problem. There was no room to make the runways at Midway longer, so the airport could not expand. Jets must have long runways to take off and land. Chicago needed a new airport.

Near Chicago was an airfield that was used by the U.S. Navy. It was called O'Hare. There was plenty of room around O'Hare to make the long runways needed for jets. The city of Chicago acquired O'Hare. It built new terminals and new runways. Most of the airlines began to use O'Hare instead of Midway. O'Hare became the world's busiest airport.

There are over 640,000 takeoffs and landings at O'Hare in a year. Thirty major airlines have flights that go in and out of O'Hare to places all over the United States and to other countries. Millions of passengers use O'Hare in a year. Some of them change from one airline to another in Chicago, just as the rail passengers used to change trains. But the air passengers do not have to go to another airport. All they have to do is walk the miles of corridors of O'Hare.

In addition to passenger travel, O'Hare handles millions of pounds of freight. Everything from fresh lobster for restaurants in Chicago to animals for one of the zoos comes by air freight. Although shipping by air costs more money than shipping by rail or truck, it is the best way to send perishable goods or goods that are needed in a hurry.

Tons of airmail come through O'Hare each day. The story you are reading now came through O'Hare on its way to another city to be set in type.

You probably have many goods in your home that came through Chicago, rail and air center, on its way to you. Maybe the toys you play with, the clothes you wear, the books you read, and the food you eat come through Chicago on their way to you. Maybe you have come through Chicago too!

Social Science Satellite Kit

REGIONS OF THE UNITED STATES

Rochester: The Flour Mill That Became a City

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Rochester: The Flour Mill That Became a City

Harold Norton

Many years ago some pioneers moved west. They sought new land to settle. One evening they camped beside a rushing river. The clear, cold water tumbled over three small waterfalls. Then it fell into a huge lake nearby.

Thick forests of pine and oak lined the river. Beyond were fields of rich soil. The settlers saw that this was good farmland. They knew it would produce fine grain. The waterfall would provide waterpower. They could build a mill beside the falls. It would grind their grain. They would settle here.

The settlers were on the banks of the Genesee River in New York State. The nearby lake was Lake Ontario. The land did produce good crops. The grain was of high quality, and the mill on the Genesee River did grind the grain into fine flour.

In 1812, the little settlement had only a few wood huts huddled around a mill. But twenty years later, it had grown into a little town of seven thousand people. There were many neat white houses and clean streets, and the settlement was called Rochester.

More settlers came to the Genesee farmland. Then the Erie Canal was built. It linked this farmland to New York City and the big markets of the East Coast.

Farmers sent their produce by barge to New York City and other large cities. In return, they received farm machinery and other things they could not produce themselves.

The flour of the Genesee mills was very good. Many people wanted to buy it. More mills were built. More people came to Rochester. Before long, the mill town was the flour capital of the world. It produced 300,000 barrels of flour every day.

Then things began to change. New farmland was offered farther west. The new farms were much bigger than those in the Genesee region. Their wheat was as good, and they could grow more of it. The farmers in Illinois, Missouri, and Kansas could sell their grain more cheaply. This was because they produced more of it. Railroads had reached those states. Now grain could be shipped easily to the big markets of the East.

So there was less demand for Rochester's grain and flour. Some people left the city and its surrounding farms.

Then one day a shy, clever, and thrifty young man came to Rochester. His name was George Eastman. The young man's hobby was photography. One summer he planned to go on a vacation. He wanted to take pictures along the way. He bought $96 worth of camera equipment. He did not make the trip, but he did start experimenting with making cameras and film. At that time, cameras were very large. They were also hard to use.

In 1888, George Eastman invented a small box camera. He called it a Kodak* camera. In 1895, he invented a pocket-size camera. Two years later he invented a folding camera.

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*Kodak is a trademark of the Eastman Kodak Company.

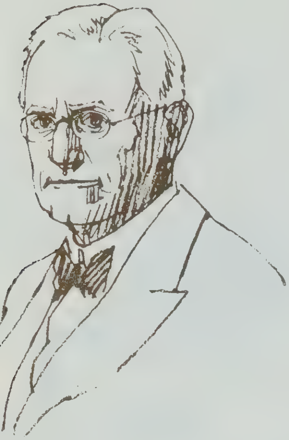
These cameras were easy to carry and easy to use. They did not cost much. Photography soon became a popular hobby. Many people bought cameras. George Eastman formed the Eastman Kodak Company. Within a few years, millions of people in the United States were using Kodak cameras. The Eastman Kodak Company soon employed 15,000 people in its factory in Rochester.

Eastman wanted the most skilled workers he could find. He brought people from other parts of the United States. He even brought them from foreign countries. Rochester began to grow quickly. New homes were built. New schools were erected.

Children of the farmers left the farm. They learned skills they could use in the Eastman Company. Soon, about one out of every three workers in Rochester worked in the Eastman plant. Farming was no longer important to Rochester.

As more people bought cameras and film, Rochester's income grew. Eastman became a very rich man. He dreamed of making Rochester a better place to live and raise a family. He spent millions of dollars making his dreams come true. He helped build the University of Rochester. He helped build a music school, a dental clinic, and a medical center.

George Eastman encouraged other industries to come to Rochester. Most were what we call clean industries. That is, they did not cause much smoke or dirt. Among other things, these factories made eyeglasses, thermometers, typewriter ribbons, and



carbon paper. Eight hundred different products were manufactured in Rochester. The town now stretched for about twelve miles on each side of the Genesee River.

Rochester became a big port on Lake Ontario. From there, ships carried coal from Pennsylvania and West Virginia to other ports on the Great Lakes. The city became an important transfer point. Boats from other Great Lakes ports carried goods to Rochester. There, goods were transferred to railroads or trucks and carried to cities throughout the eastern United States.

Neither George Eastman nor the people of Rochester wanted their city to become a giant city. They wanted a beautiful city where people could be happy. Rochester and its suburbs now have a population of a half million people, but the owners of the factories in town have helped keep Rochester beautiful. The city has 17 parks with baseball diamonds, tennis courts, and swimming pools.

There are plenty of skilled workers in Rochester. Students who graduate from Rochester schools often get important jobs in its factories. In turn, they try to help the schools train more bright people for their companies to hire.

Sixty percent of the people in Rochester own their own homes, and they take good care of them. The streets are wide and lined with trees. Yards and gardens are well tended. People there think that Rochester is one of the best places to live and raise a family.

Like other big cities, Rochester has had its problems. As the city grew and people moved to the suburbs, Rochester's downtown section became run down. The streets were too narrow for all the traffic. Everything was becoming cramped and ugly.

The people of Rochester hired specialists to help make their city more attractive. A huge new plaza was built in the center of the city. To save space, it was constructed with three tiers. A giant garage was built underground. On the ground level, stores were placed around an open square. Trees and flower gardens were planted in the square, and fountains were built. The first two floors of the buildings are used for shops and stores. The other space is used for business offices.

Rochester has changed from an agricultural town to an industrial city. But the city remains attractive. Tired shoppers can relax in the shade of trees by the fountain in the plaza's sidewalk cafe. They can listen to the splash of water. And they may hear the rustle of wind—just as pioneers did when Rochester was a small farm village with a flour mill.

Social Science Satellite Kit

REGIONS OF THE UNITED STATES

Philip Murray

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Philip Murray

Ray Warwick

Philip Murray was born of Irish parents in Scotland in 1886. His father was a coal miner and leader of the miners union in his town.

Philip was working for the miners when he was only seven years old. After school, he collected food for the soup kitchens. These soup kitchens fed the miners during a long strike.

When the tenth child was born into the Murray family, Phil quit school. He had to help with the family income. He was the oldest son. He went down into the mines and worked as a helper alongside his father.

Like many other families in Europe at that time, the Murray family finally decided life there was too hard. They hoped it would be better in America.

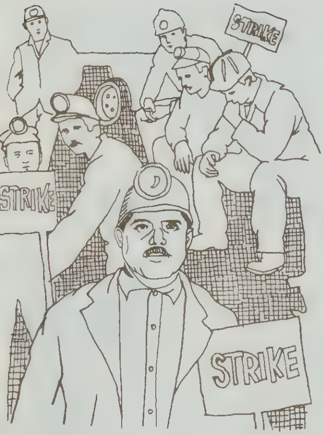
In 1902, Philip and his father crossed the ocean. Since they were miners, they went to Westmoreland County in Pennsylvania. There they could find work. Westmoreland County is a soft-coal mining area not far from Pittsburgh.

Young Philip shoveled coal with his father. He was paid a dollar for each mine car he filled. The boy worked hard. He earned three dollars a day.

Shoveling coal deep in a mine was very hard work. It did not keep Philip from studying during the evenings, though. He studied hard and he finished his schooling in half the time most students take.

One day at the mine the weigh boss was weighing coal cars. The weigh boss said that Philip's car was not full. If it were not full, Philip would not get the one dollar for his work. Philip knew it was full. The two men argued. Before the argument was over, young Philip had punched the weigh boss on the chin.

The other miners trusted Philip Murray. His father also believed in him. So they all went on strike.



Philip went with a group of miners to talk to the manager of the mine. They said they had been cheated by the weigh boss. Philip was fired. And that was not all.

By this time, Philip and his father had managed to bring the rest of their family to Pennsylvania. The whole Murray family—including small children—was forced to move. The house they lived in belonged to the mining company. So the family moved into a tent.

The miners struck for four weeks. They were without pay all that time. Their families were hungry. Finally, they went back to work. The miners lost the strike, and the town police took young Philip to Pittsburgh. They warned him never to come back to Westmoreland County again.

The sheriffs and mine managers did not know it then, but they had done the miners a great favor. They convinced young Philip that he should spend his life helping working men and women in the United States. He began to organize miners in the Pittsburgh area into a union. By the time he was thirty, he had been elected president of the local mine workers union.

Four years later, he was elected vice-president of the United Mine Workers of America. At the same time, John L. Lewis became the president. The two men worked together. They aimed to improve the wages and working conditions of miners.

At that time, the American Federation of Labor was the biggest labor federation in the United States. It was made up of many unions of skilled workers. There were unions of printers, plumbers, electricians, carpenters, and other craftsmen.

In 1935, Lewis and Murray spoke to the AFL. They asked the AFL to let unskilled and underpaid workers in factories join their union. The AFL refused; their union was for skilled craftsmen only.

So John L. Lewis and Philip Murray founded another big labor union. They called it the Congress of Industrial Organizations, or the CIO. It was made up of workers in the auto, steel, rubber, and other industries.

John L. Lewis was the first president of the big CIO. In 1940 he resigned, and Philip Murray became the second president.

The CIO got started during an economic depression. Millions of workers had no jobs. The CIO tried to improve wages and working conditions, but it was hard to do this when factories were closing.

In 1941, when World War II started, factories began to produce guns, tanks, airplanes, and ships. Philip Murray promised the president of the United

States that the CIO union workers would stay on the job all through the war. They would not strike for higher wages during that time.

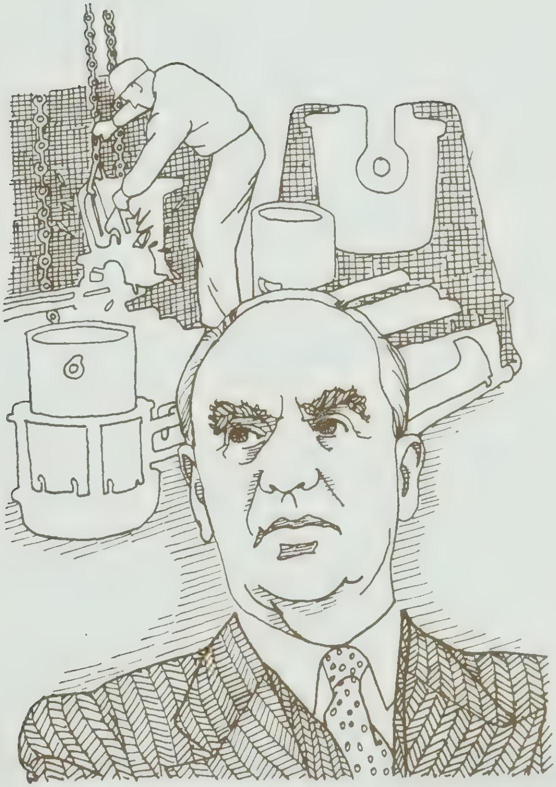
After the war, Philip Murray was interested in keeping the peace. He wanted tax money to be used to help rebuild Europe. Much of Europe had been destroyed in the war.

He fought those in the labor unions who did not want to help Europe. Some workers wanted to take control of the industries. But Murray did not think that workers should own industries. He just wanted workers to have a better life. He wanted them to have good food and clothing. He wanted them to have a carpet on the floor, a picture on the wall, and music in their homes. He wanted workers to have a peaceful old age without money worries. He worked to help steelworkers get this.

In 1949, the steel companies agreed to give steelworkers a pension. This was not easy to get. The steelworkers had to strike for six weeks before the companies agreed to grant the pensions. This pension system—in which the steel companies paid all expenses for the pensions—was the first of its kind in the country. Today many other industries have such pension systems.

Three years later, Philip Murray died in San Francisco. People across the nation mourned. He had won the respect of those in unions, in government, and in industries alike.

Philip Murray was a wise and gracious man. And he fulfilled a promise he had made when he was only eighteen. He spent his life serving his fellow men. He served them well.



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REGIONS OF THE UNITED STATES

Texas Water Problems

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Texas Water Problems

Leota Matthews

Texas has been one of the fastest-growing states in the United States. In 1880, there were one and a half million people living in Texas. By 1970, there were about eleven million people in the state.

The need for water is great. People need it. Cities need it. Industry and agriculture need it.

Some Texans have become worried. The population is growing. Cities and industries are growing. But the state's water supply is not increasing.

Texans use water in a variety of ways. The oil industry pumps water into the earth. It goes below the oil-bearing rock, and forces oil out of the oil wells.

The city of El Paso and the irrigated farms around it use huge amounts of water. It comes from the Rio Grande. The area also draws water from irrigation wells. The first irrigation well was drilled in the high plains region of western Texas in 1941. By 1968, there were 63,000 such wells in the area. There are plans to irrigate two million more acres of farmland in the next 15 years.

The high plains of western Texas are a great cotton-producing area. Farms can grow as much sorghum as farms in Indiana. But the semiarid country must be irrigated in order to produce cotton or sorghum.

Cities near oil fields find salty water seeping into into their water wells. Farmers must dig deeper wells to get pure water. The underground water level is falling.

In the 1950s, there were six years with hardly any rain. This was one of the worst dry spells in 400 years. This dry spell was finally broken in the spring of 1957. Heavy rains fell. But the ground had been baked hard by the long, dry, sunny spell. So the downpours ran off the hard-baked earth. The water didn't soak into the soil. There were not enough reservoirs. So they didn't catch all the rain. The result was great flooding. Farmland was damaged. People and animals were in danger.

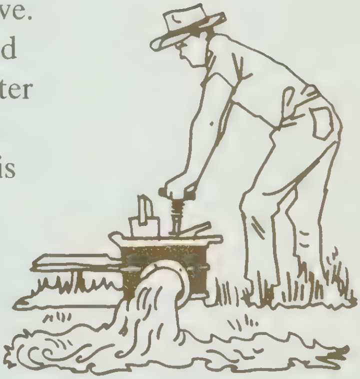
The governor of Texas called the state lawmakers to a special meeting. They passed the Texas Water Act of 1957. This set up the Texas Water Board.

The members of the board went around the state. They talked to people. They wanted to know where Texas gets and uses its water. This is what they found out:

Rain is one source of water for Texas. But nature gives Texas either too much or too little rain. In northeastern Texas, 55 inches of rain is about average for a year. In southwestern Texas only 9 inches fall in the same period. In the high plains of western Texas 18 inches fall; this rain comes in downpours between April and September. Some of it collects in small lakes and seeps into underground water pools. But a large part evaporates in the hot, dry Texas air. Sometimes there are several wet years in a row. These are followed by a number of dry years.

Another source of water for Texas is groundwater. Groundwater is stored deep in the earth. It lies in pools between rock layers. There are many such pools.

About three-fourths of the water Texas uses comes from wells. Pumps bring up the water from underground pools. Pumping has always been an easy way to get water. Well water does not cost much; and in some parts of Texas, it is the only water supply people have.



In recent years, the cities and farms have pumped out a lot of water. The level of the underground water is falling. Scientists say that most of this water will be used up by the year 2020. Almost one-third of it is already gone.

A third source of water for Texas is rivers and streams. Most Texas rivers have large amounts of salt in them. The Pecos River in western Texas is an example. Its water is too salty to be used to irrigate farmland. It must be purified first.

The Canadian River in northern Texas supplies part of the state's water. But Texas must share the river with New Mexico and Oklahoma.

The Red River forms the boundary with Oklahoma. But Texas, Oklahoma, Arkansas, and Louisiana must all share this river water.

In the south, the Rio Grande is the boundary between Texas and Mexico. The water is divided between them.

Cities and industries have dumped wastes into the rivers. The oil industry has been responsible for large

quantities of pollution-causing wastes. Polluted water cannot be used unless it is cleaned. This costs money.

Many rivers in Texas disappear in summer. They just dry up. So even clean rivers may not be dependable sources of water.

After looking into the situation, the Texas Water Board was shocked. Before the year 2000, parts of Texas would have no water at all. Something had to be done.

In 1968, the board presented a water plan to the governor and the people of Texas. The plan involves bringing water from the Mississippi River by canals. Engineers say there is more than enough water in the Mississippi. Much of it flows past Louisiana without being used, and it continues into the Gulf of Mexico.

Some people object to the plan. They say there is no extra water in the river. They say if Mississippi River water goes to Texas, the river level upstream will fall. Then the Arkansas River level will fall.

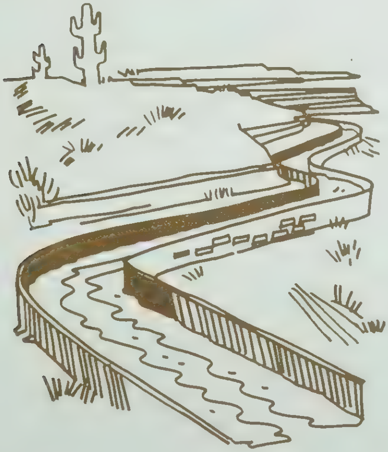
The Texas Water Plan aims to have Mississippi River water flowing into Texas by 1980. Pipelines and canals will have to be laid from the Mississippi River to New Mexico, and across northern Texas. Reservoirs must be built to store the water. The greatest need for the water is in western Texas. But parts of western Texas are three thousand feet higher than the Mississippi River. Pumps must push the water uphill to western Texas. So new electric generating plants must be built. They will work the electric pumps. A computer will be needed. It will control the use of water in different parts of the state.

All this work will cost millions of dollars. Texas would pay for part of it, and the United States government would pay for part. Some people wonder whether the country can afford such a plan. Others say the country cannot afford *not* to go ahead with the plan.

Meanwhile, water engineers ask farmers to plant grass on hillsides. This will slow up the water runoff. More water will sink into the soil and underground pools.

Farmers are being asked to destroy thirsty, water-using trees. These include the mesquite and the cottonwood.

Oil drillers are encouraged to use salty water instead of pure water when they can. Cities and industries are looking for ways to reuse water. And water experts hope to find cheaper ways to take salt from seawater. Think how helpful the Gulf of Mexico could be to Texas!



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Social Science Satellite Kit

REGIONS OF THE UNITED STATES

The King Ranch

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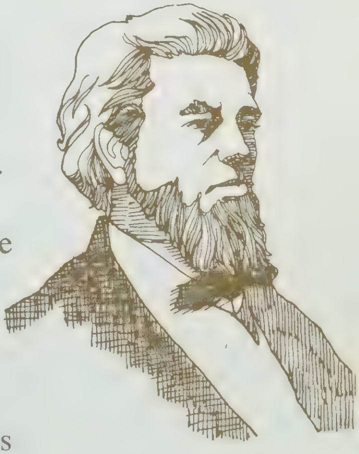
The King Ranch

Ardis Sanders

In south Texas, there is a region of plains and hot dry weather. But when it does rain, it pours. Sometimes 30 or 40 inches of rain will fall in a few days. In a land so flat, water drains slowly. Insects breed in the still, stagnant pools.

Life is hard for men and animals in this region. At first, few men were tough enough to stay there. It was an empty, lonely grassland. There were only herds of wild horses, called mustangs. This area was called Wild Horse Desert.

Then a riverboat captain came to this wild country. His name was Richard King. He saw the prairies covered with tall grass. He thought: What a fine place to raise cattle!



In 1853, he bought 15,500 acres of Wild Horse Desert. It cost less than two cents an acre. He named it the Rancho Santa Gertrudis. This was the name of a small creek nearby. The ranch grew into the famous King Ranch. It covers 1,200 square miles.

From the beginning, Captain King planned to run his ranch as a business. He was the first man in the area to raise large numbers of cattle.

Captain King hoped to find a way to sell beef profitably to the large markets in the eastern United States. No other rancher had done this.

Of course, there were many problems to solve. South Texas had little water. So the cattle had to walk long distances between watering places. In years of drought, some watering places would go dry. Then the cattle would die. Captain King built dams to hold the water in streams so that the cattle would have water. He also built fences to keep his cattle from straying and to control their grazing.

Richard King started his ranch with cattle called Texas Longhorns. They had been brought from Spain to Mexico by the early settlers. They were the only cattle that could live in the area at that time.

But for many years, Captain King lost more cattle to thieves than to natural causes and the climate. Bandits raided the ranch, then escaped across the border into Mexico. There were times when 200,000 cattle were stolen in Texas in one year. Great numbers were taken from the King Ranch.

Captain King did all he could to defend his ranch. His ranch hands acted as guards. He built a fence around his land. He sent men across the border into Mexico to find his stolen cattle and bring them back. It was a difficult task.

Many ranches and towns were attacked by outlaws who roamed the area. They robbed and killed people. The Texas Rangers brought law and order to this region. But for a long time, men like Captain King had to protect themselves.

At first, hides and tallow were important sources of income for the King Ranch. Made from cattle slaughtered on the ranch, the hides and tallow were shipped by sea to the East Coast.

A market for fresh beef was too far away. The weather was too hot for the meat to stay fresh along the way. And for a long time, there was no way to transport large numbers of live cattle to the market.

Then, in the 1870s, Captain King found a way to market his beef. Great herds of cattle were driven north by cowboys. They went over long trails to the railroad lines in Kansas and other states. From there, the cattle were shipped to markets in other parts of the country. Now, only the smaller and weaker animals would have to be slaughtered at the ranch. These were the ones that could not make that long walk.

For a while many thousands of cattle from the King Ranch were sold to start new ranches. But then people did not want Longhorn cattle. It was believed that the Longhorns spread disease wherever the great herds passed. This disease, called Texas fever, caused many of the other cattle to die. Ranchers in states north of Texas finally would not allow Texas cattle to come into their areas. Much later Captain King's son-in-law, Robert J. Kleberg, Sr., suggested that an insect called a tick caused the fever. He was right. When the ticks were killed, the fever disappeared.

Other problems arose. People moving into the Great Plains fenced off much of the land. This caused trouble for the Texas herds moving north on their way to the railroads.

Captain King tried to figure out a way to solve this problem. Once he thought of buying a strip of land three to six miles wide for cattle herds to pass through. He wanted it to go all the way from south Texas north to the Dakotas. But he gave up the idea.

For several years after that, Captain King's greatest efforts went into improving his cattle. He wanted cattle that would produce more beef than the Texas Longhorns did. He brought some English cattle to his ranch. These were called Shorthorns and Hereford cattle. They were good producers of beef. By 1900, they had replaced the Longhorns on the King Ranch.

The new cattle did not do well in the climate of the King Ranch. Fine healthy cattle arrived. But after a while they fell sick. They could not stand the heat, the disease, and especially the ticks of the region.

The King Ranch needed cattle that could thrive in the climate and still produce meat like the Shorthorns. Where could it find them? One day in 1910, a man named Tom O'Connor gave the King Ranch a bull. It was half Brahman and half Shorthorn. The Brahman is a humpbacked breed of cattle from India. It is able to live well even in hot climates.

The King Ranch bought fifty-two Brahman bulls for breeding. Their little calves grew to be strong and meaty cattle. But they were of different colors. People who buy cattle want the animals to be the same size and color.

Color is important for another reason. A white animal may get sunburned. It has little protection against the sun's rays. But a black animal suffers from the heat. Black absorbs the sun's rays. This makes the black animals hotter. So red seemed a good choice.

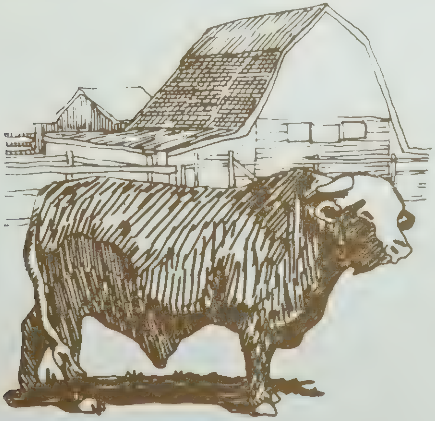
Robert J. Kleberg, Jr., who has run the ranch for over fifty years, liked the deep red color. He liked the idea of big red cattle. He thought they should produce meat like a Shorthorn but be able to stand the climate like a Brahman.

The first bull close to what Mr. Kleberg wanted became the herd parent, or sire. The cowboys named him Monkey because he was very playful when he was young. The best son of Monkey was Santa Gertrudis I. Many other calves were raised. Only the big red cattle that gained weight fast in the hot climate were kept.

Today the Santa Gertrudis cattle are bought by many other ranches all over the world for breeding. One King Ranch bull sold for $52,000.

Why do these bulls sell for so much money? People are willing to use their savings to buy good bulls. Then they can breed herds that will produce beef faster. This will earn them more income.

The Santa Gertrudis breed—the first truly American breed—is world-famous today. Captain King and his grandson, Robert J. Kleberg, Jr., found a way to adapt the cattle raised on the King Ranch to nature.



Social Science Satellite Kit

REGIONS OF THE UNITED STATES

The Resource of Geography and The Windeckers' Plastic Plane

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The Resource of Geography

Dr. Everett G. Dillman

On July 16, 1945, a group of men met on the barren desert of southern New Mexico. They wore dark glasses. They crouched in deep ditches and in protected forts. Suddenly the sky lit up like a hundred suns. A great ball of fire rose from the desert floor. The men heard a great noise. A hot wind blew over them. They had just seen the first explosion of an atomic bomb. The bomb had been developed in great secrecy in the town of Los Alamos in New Mexico.

This testing region is in the western part of the South Central Region. The center of it is the Rio Grande Valley. It stretches north from El Paso to the central part of New Mexico. In this area, soldiers and armaments have been the main support of the economy.

The South Central Region was chosen as a good place to test military equipment. The dry desert climate makes for clear skies. This is good for testing planes and missiles. The geography and climate of the area have been turned into a valuable resource. In some parts of the region there are few people. Machines and equipment can be tested in greater secrecy there.

Many military bases dot the region. Fort Bliss is at El Paso, Texas. Much of El Paso's income comes from the armed forces.

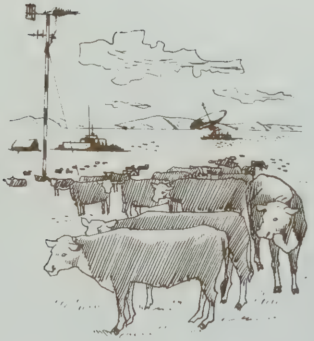
Los Alamos has 14,000 people. Most of them work on government defense projects.

Albuquerque, New Mexico, was a sleepy little town of 30,000 people before World War II. Now it has 200,000 people. One-fourth of their income comes from government spending.

Alamagordo, New Mexico, was also a little desert town. In 20 years, it had 25,000 people.

Las Cruces grew from a small village to the third largest city in New Mexico. Not far away is the White Sands Missile Range. Once this was just a desert, but now it is covered with strange sights. Roads crisscross desert sands. They connect rocket launchers and radar domes. Electronic equipment—in strange shapes and sizes—dots the barren land. Houses and huts for men and machinery spring up in strange places.

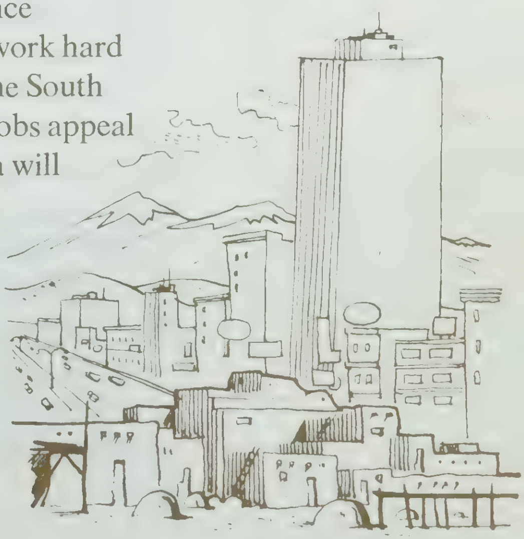
Before World War II, ranchers used land in the western Rio Grande Valley as grazing land for their cattle. Since the land was poor, each rancher needed a lot of it. It took more than fifty acres just to feed one animal.



Since World War II, the government has taken over more and more of this land. There is little left for grazing. The ranchers have complained. They say they need the land to make a living. The government in Washington has begun to pay ranchers higher prices for their land. This helps a bit. But many ranchers are still upset. Their way of life is being threatened.

Others in the valley are not so unhappy about the situation. Many people are pleased. As the military bases in the area got bigger, more jobs opened up. New people came to the desert. Some residents hope that the new cities have developed a base for a different kind of economy. They hope that this part of the South Central Region will never again return to a desert economy.

Today, fine highways, phone lines, air routes, and airports dot the landscape. There are support industries, such as utilities, services, and manufacturing. The South Central Region has grown up. Its new look cannot easily be destroyed or abandoned. The cities have invested large amounts of money in streets, parks, small shops, and large buildings. Perhaps most important, the defense activity brought a new kind of man into contact with the desert. He is a city dweller who works in shops, plants, and offices. Air conditioning, water systems, and modern communication are part of his world. These conveniences were needed to make the new residents comfortable in the region. These people have come to feel at home in the desert landscape. They enjoy the high, dry climate. They like the beauty and feeling of openness that the desert brings. Once having lived here, they intend to stay. Some work hard to encourage others to come to this part of the South Central Region. The nice climate and good jobs appeal to many people. So it is unlikely that the area will again house small, quiet desert communities.



The Windeckers' Plastic Plane

Wain Miller

Dr. Leo Windecker and his wife, Dr. Fairfax Windecker, were dentists in Houston, Texas. They led a busy life and enjoyed their work.

Like most parents, they wanted to send their children to college. It would cost a great deal of money. So they looked for a company in which they could invest their savings.

They read that many people would like to own their own airplanes. But the price was too high for most people. The Windeckers realized, however, that if planes could be made more cheaply, a lot of people would buy them.

They were surprised to learn that just about all airplane manufacturers make their airplanes the same way. So all airplanes of the same size and kind cost about the same.

Most planes are made of metal parts. It takes many men to cut, shape, and put together the metal parts. This is why the planes are so expensive.

Dr. Leo Windecker asked, "Why are planes always made of metal?" The reason, he was told, is that metal is the only material strong enough and safe enough for planes.

"It seemed to me," said Dr. Windecker, "that someone should be able to find a cheaper way to build an airplane. I knew of no one else working on the problem. So I decided to think about it myself."

For more than a year, the Windeckers worked during the day at their dentist office. At night, they studied airplanes. Soon they became more interested in airplanes than in dentistry.

They kept searching for a material as strong as metal. Then one night during the Christmas holidays of 1958, Leo Windecker was making a model airplane. He said, "I was sitting at the dining table making a wing out of some plastic foam, when it began to dawn on me. Why not make a plane out of plastic?"

That was the breakthrough they were looking for. Plastic airplanes!

As dentists, the Windeckers knew the strength of plastic materials used in false teeth. They are cheaper and easier to use than metal. They will not rust or decay as metal parts often do.

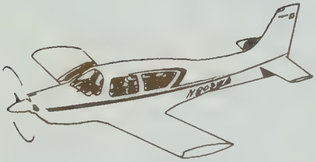
But none of the plastics they knew about were quite strong enough for airplanes. In July 1959, the Windeckers left their dentist office. They said goodbye to their patients, their home, and their city. They moved to an old airport in Hondo, Texas. There they would spend years trying to build a strong plastic airplane.

Everyone said it couldn't be done. They said that a plastic airplane would break. If enough plastic were used to keep it from breaking, the plane would be too heavy to fly. Still, the Windeckers believed in their idea and they kept working.

For the next seven years they worked. Finally, in October 1967, their little plastic plane was ready. They called it *The Eagle*.

It took off, and, sure enough, it lifted easily into the air. It turned left and right, it circled. The pilot tested it thoroughly. But at the most difficult part, when the plane was supposed to dive and spin, it crashed. The pilot parachuted to safety. The plastic had held up. The plane was just badly balanced.

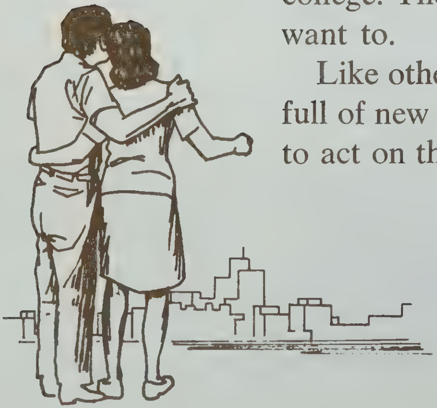
After one more year of work to balance the plane, the new *Eagle* took off again. This time it flew perfectly and passed all the tests.



Now many people were interested in the plastic planes. In September 1970, the Windecker factory began production. It is now producing plastic planes that are cheaper than those made of metal. The day is now closer when almost everyone who wants his own plane can afford one.

Dr. Leo Windecker and his wife are glad they did not listen to those who said it could not be done. All this happened because they wanted to send their sons to college. They now also have money to retire if they want to.

Like other people in the region, the Windeckers are full of new and daring ideas. They also have the courage to act on them.



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The Disappearance of Larry

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The Disappearance of Larry

J. Zeb Wright

Larry and Jim were two GIs at the Fort Jackson Army Base in Columbia, South Carolina. They lived in the same barracks. They were bunkmates.

For three weeks they had lived and trained together. They had just passed the tough army basic training program. During this time they had become good friends.

Jim admired Larry. Larry had received the Soldier of the Week award. This was an award for excellence in training. Larry had won it twice.

Now they were both hoping to get their first weekend pass. Then they could go visit their families and friends. They had not seen them since coming into the army.

But they could not get the pass right away. First, they had to pass barracks inspection. The sergeant would soon come to see how clean everything was. They had scrubbed the floor. Their lockers were clean. Their shoes were shined.

Suddenly Larry said, "Quick, Jim, smooth out that wrinkle on the bed. We want to see Post Road again."

Jim turned to face Larry. He was amazed.

"What do you mean?" cried Jim. "How did you know I live on Post Road?"

Larry smiled. "I live on Post Road, too, Jim. You didn't know me back home. But I've known you all my life."

Jim didn't know what to say. He really didn't remember Larry. Larry was black. Jim was white. Jim had never paid much attention to blacks back home.

Larry said, "You are Charlie White's boy. Eliza Williams is my mother. We've picked cotton many times for your pa."

Jim thought: *How strange. We have lived near each other all our lives, and we like each other a lot. We could have been friends all these years. But we never met until we joined the army, miles from home.*

Larry was thinking about his family. He had lived all his life in a country shack. He had seven brothers and sisters. Larry never knew his father. But his mother was famous in that part of the region: she made whisky. So did lots of other people in the area—blacks and whites alike. Then they sold the liquor.

The sale of homemade liquor was against the law. But how else could Larry's mother make money? She had to feed a large family. She tried to find other ways to make a living. But it was not possible.

Larry's mother did not own the land or the house they lived in. His family worked the land for someone else. Most families who worked the land for other people had a healthy man who owned his own mules. He could plow the land and plant it. He could cultivate and harvest the crops. For this, his family could keep one-half of the crop and give one-half to the owner of the land. These families were called tenant farmers.

Larry's family had no healthy man and no mules. The landowner had to plow the land. Larry, with his mother and brothers, did all the rest of the work. For this, they could keep just one-quarter of the crop. Larry and his family were not tenant farmers; they were called sharecroppers.

"Attention!" someone snapped. Jim and Larry jumped. Their thoughts were interrupted. The sergeant entered the barracks. He examined everything carefully. Finally, he smiled. The men had passed the inspection. They got their passes.

On the way home, they talked about the future. Larry had learned that he would be sent to Germany soon. Jim was going to Japan.

"Let's not lose contact," said Larry.

When they reached Post Road, Jim jumped off the bus quickly and said, "See you back at camp."

A few weeks later, they were preparing to ship out. On the last day, they said goodbye. They promised they would always be friends. They agreed to look each other up as soon as they returned home.

Two years passed. Finally Jim returned home. His friends and family greeted him at his home on Post Road. They had a nice party.

The next morning, Jim thought of Larry. Where was he? Larry's time overseas was supposed to be two years. So he should be home too.

Jim walked down the road toward Larry's house. He had passed that house a thousand times. But he

had never really seen it. Now he saw it for the first time. *This is Larry's home,* he said to himself. The house was wood. It was run down. A hound trotted out of the front door of the house. It ran down the rickety steps.

He heard a child call out, "Mama, there's a strange man in the yard." He walked to the door. He looked into a single room. There were no beds, only mattresses in a corner on the floor. Young black children were playing inside. Some were naked.

A woman walked out onto the porch. She looked at Jim. "What do you want around here?"

"Mrs. Williams, is Larry home?" Jim asked.

Quickly she replied, "There ain't no Larry round here! Who are you? Are you a lawman?"

Jim explained that he was a neighbor. He said that he was Larry's friend. Suddenly the anger left the woman's face. She told him about Larry.

Larry had returned home a few weeks before. But he didn't stay long.

Mrs. Williams began to cry. "Lord! Lord! I'm just heartbroken. My son came home after all that time. I was so happy to see him. But you know, it was like Larry couldn't stand his home anymore. He didn't seem happy.

"Then he told me he was leavin'. He told me he had to go to the city. I asked him to please stay at home with his family. He just shook his head, sadlike, and looked away."

"No, mama, I can't," he said. "In these hills, all I am is a poor, black sharecropper. All I'm ever gonna be is a poor, black sharecropper. Somewhere—up in New York, maybe—there'll be a better life for me."

"And so he left. Took his clothes, and off he went to the big city. And I ain't heard from him since. Seems like he's just been swallowed up by that city."

Jim and Mrs. Williams stood and looked silently at one another. Finally Jim turned and walked slowly back up Post Road to his own house.

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A Trip Through the South

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A Trip Through the South

Reese Cleghorn

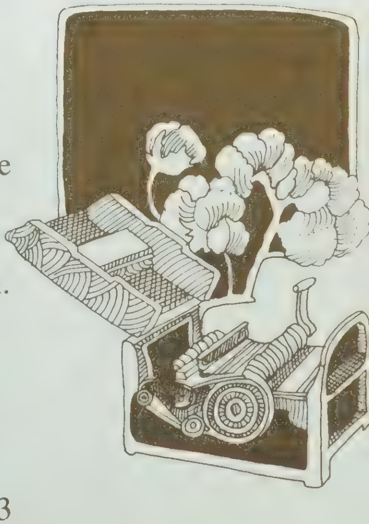
I want to take my children on a trip. It is a trip in search of the South. I want them to get the feel and the sound of the Southland. The South is not just a place. It is a way of acting and thinking.

But the land is changing. The people are changing. The old South will be gone one day. Before it disappears, I want my children to feel the summer stillness of a sleepy town. I want them to smell the pine trees on a smoky fall morning.

The South's history is different from any other part of the country. It is a history of tears and joy, defeat and hope. The South is so different it has been called "a country within a country."

The South went its own way mainly because of the cotton gin. It was invented by Eli Whitney in 1793. Machines change us. This one machine changed a whole people. It changed the South.

The gin prepared cotton for cloth faster than ever before. People could make more money growing cotton. The South had a warm climate and fertile soil. Much of it was good for growing cotton. Southerners lost interest in the small farms. They created, instead, great plantations. Here cotton grew in fields that stretched



for miles. Then the South began to depend on slaves brought from Africa. The slaves were needed to work in the fields.

It was slavery that first made the South different. How could people believe in slavery? Didn't our Declaration of Independence say that all men were created equal? Why did some people think that men from Africa were inferior?

Slavery made many white men worry about right and wrong. They thought slavery might be wrong. But they didn't see how they could live without it. Their lives were built on slavery. Who would work the fields? Who would clean the huge plantation homes? What would happen to the cotton? Who would take care of the slaves? They had no education. Could they look after themselves? These have always been painful questions for Southerners to think about. They have always had this struggle within themselves. That is partly why the South is the way it is.

Let's start our trip at the Black Belt. This is a wide strip of black soil. It runs from Virginia to Texas. It goes through South Carolina, Georgia, Alabama, Mississippi, and Louisiana. The big cotton plantations were here. Some remain.

The poet Stephen Vincent Benét described a part of the Black Belt in the poem *John Brown's Body.*

A smokiness so vague in the air
You feel it rather than see it there,
A brief, white rime on a red clay road
And slow mules creaking a lazy load
Through endless acres of afternoon,
A pine-cone fire and a banjo-tune,
And a julep mixed with a silver spoon . . .

Life in the Black Belt is sometimes still like that. But it is changing rapidly. Machines now do the work on plantations. The great-grandchildren of slaves who worked the fields are gone. Most of them are in the big cities. But you still see the red clay roads. They are near the superhighways. Near them are the new factories.

Next we go to Charleston, in South Carolina. This used to be the capital of the state. It also was one of the richest cities in North America. In 1782, J. Hector St. John Crèvecoeur visited Charleston. He said that it was a beautiful and happy place for whites. But beside the beauty he saw ugliness. It was the ugliness of slavery. He saw black men and women whipped. He saw how black people were made to work.

But built on these horrors was a beautiful city. It is still beautiful. Charleston represents the best and the worst of the old South. Fort Sumter is a federal fort in Charleston. A man named Edmund Ruffin led a Southern attack on Fort Sumter many years ago. It began the Civil War. The war ended slavery in America. But Ruffin killed himself after it. He did not want to live in a nation where everyone was equal. He did not believe in a democratic country.

Ruffin's story shows how men can destroy themselves by trying to defend a bad idea. It shows the stubbornness and even the craziness that has existed in the South.

But there have always been better men in the South. Near Mayesville, South Carolina, we go past wooden shacks. We pass black swamp water and cypress trees. We take a turn on a winding dirt road. There before us is Rip Raps Plantation. Its former owner was James McBride Dabbs. His grandfathers built this plantation. He farmed what was left of it.

Mr. Dabbs knew that the South was changing. There were more factories. Cities were growing. The countryside was becoming industrialized. But he wanted to keep some of the old Southern ways. People should be more polite to one another, he said.

He hated to see people moving into towns. He thought they were in too much of a hurry there. He wished people had more time. Then they could live more like people do on farms and in small towns. From Rip Raps we go north to Virginia. Here is Thomas Jefferson's plantation. It is called Monticello.

Jefferson helped write the Declaration of Independence. The Declaration of Independence said that all men are created equal by God. But Jefferson wanted to put something in it about slavery. Other Southerners stopped him. Many of his neighbors turned against him. They were not interested in the rights of slaves or poor people.

We will travel to the Mississippi Delta. That is where the river enters the Gulf of Mexico.

Near Greenville, Mississippi, we drive along the Mississippi River. Huge oaks drip with Spanish moss. These fields have not been cleared long. Bears roamed these woods a short time ago. In Greenville, we see the river docks. Here, riverboats used to stop to load cotton from the delta's rich fields.

Natchez is farther down the river. Here are many mansions. The porches are held up by large, beautiful columns. Ships from Europe used to dock here. They brought silks and wines from Europe to this area.

Farther south is New Orleans. This once was a French city. It has not forgotten its past. Ships from all over the world dock at this great port. Around the city are the lonely bayous of Louisiana.

Next we may stop at some small place in Alabama. Here the cry of one mockingbird can be heard all over town. Here ladies still store homemade preserves in glass jars.

Here people still rock on their porches in early evening. They talk quietly to each other. They watch the lightning bugs light up the dark.

Finally, we come to Atlanta. It is the largest town in the South. It is modern but it still keeps the old ways. Atlanta represents the new South. It is the industrial South.

One of the world's great men lived in Atlanta. His name was Martin Luther King, Jr. He was a black minister. He worked for an America where character is more important than a man's color.

Ralph McGill also lived in Atlanta. He was a white newspaper editor. He wrote and spoke bravely for justice. He proved that one man can help change the character of a city and a region.

These are parts of the South children should see. They should see them soon. In a few years we will not live so close to the land. We will have forgotten some old customs. But I think Mr. Dabbs of Rip Raps was right. Some of the best of the past should remain. This is what children should see. If they do, they will see what has been good in Southern life. Perhaps the children will become the best Southerners after all.

Social Science Satellite Kit

REGIONS OF THE UNITED STATES

How the TVA Saved Part of the Country

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How the TVA Saved Part of the Country

Frank Smith

The valley of the Tennessee River is one of the most beautiful parts of our country. Lines of barges move along the broad river. They carry products to and from industrial plants along the shore. Families picnic and swim in the sparkling lakes of the valley. Growing cities draw their water from the lakes. The water is cleaner than it used to be.

Fat cattle graze on green pastures. Forests are carefully tended. Forest industries produce paper, furniture, and other goods.

The Tennessee Valley lies across seven states. They are Tennessee, Kentucky, Virginia, North Carolina, Georgia, Alabama, and Mississippi. They make up one of the fastest-growing regions in the United States.

Not along ago, this area was quite different. President Franklin D. Roosevelt called it the nation's greatest economic problem. That was during the Great Depression. Jobs were scarce, and incomes were low all over America. But they were very low in the Tennessee Valley.

The Tennessee River system is the fifth largest in the country. But it was uncontrolled. Most of it was not used. The river often flooded. When it did, it destroyed everything in its path.

Farmlands were in poor condition. Farmers did not know about modern farming methods. Heavy rains washed away the best soil. Corn and cotton were planted in the same fields year after year. The land was worn out.

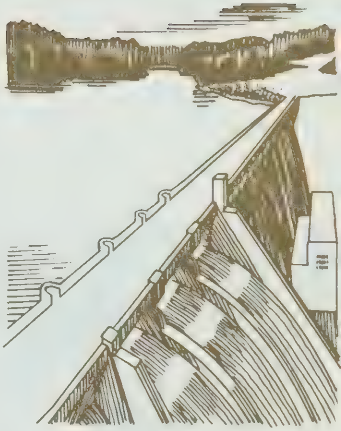
Crops were grown on steep and hilly land. People joked that a man could fall out of his field and break a leg. Things were no better in the forests. The great trees had been cut; no new ones had been planted. There was no fire patrol. So thousands of forest acres burned up each year.

The Tennessee Valley's resources were being sadly wasted. The resources had to be put to work for the people. So the United States government formed the Tennessee Valley Authority—called the TVA. Its job was to help the people of the valley.

TVA was created after ten years of dispute. The government had built one or two dams in the Tennessee Valley during World War I. Some men wanted this work continued. They wanted the government to develop all the valley's resources.

Other people said it would be a waste of money. The farmers were too set in their ways. They would not try new farming methods. These people also said it was foolish to create a lot of electric power for a poor area with so few people in it. Why was the government doing work like this, anyway? Private business, not government, should develop the area. Some of these arguments are still heard today. However, TVA became a reality.

Before TVA, there had been other plans for the valley. But the planners had worked on only one problem at a time. The TVA aimed to treat all the problems at once.

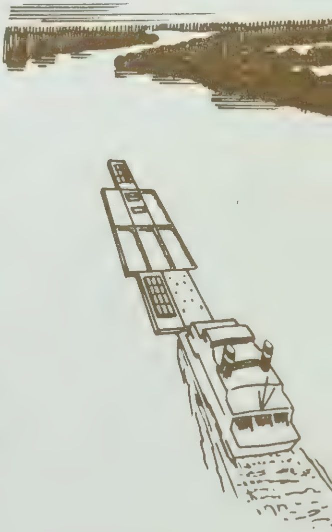


In developing better land, people would learn to make better use of rainfall. Dams would be built. Floods would stop. The water level would stay high. There could be shipping and electric power.

TVA had a second important aim. The people of the valley would help rebuild their region's resources. Decatur, Alabama, is an example of the success of this project.

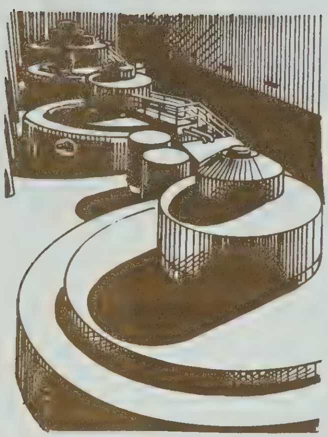
In the 1930s, Decatur was a small farming town. It had many problems. The town's leaders met with David Lilienthal, one of the TVA's first directors. The leaders wanted to know what the TVA could do for them. Lilienthal told them it would help *them* do something for *themselves.*

Today Decatur is a growing industrial city on the Tennessee River. Many other towns in the valley have had the same success. TVA gives the tools for development. But the people of the region must use the tools themselves.



One of TVA's first jobs was to control the floods in the valley. TVA built a series of large dams. Heavy winter rains are stored in lakes behind the dams. After the flood danger is over, some water is released. This makes room in the lakes for future floodwaters. Floods on the Tennessee River are now controlled. Millions of dollars in damages are saved.

Industrial companies do not fear floods now. They can build plants along the shores of the lakes. These industries offer new jobs and incomes to people. The lakes have deep-water channels for barges. Products can be shipped straight from the plants to other areas of the country. Barges can carry as much as 400 railroad carloads of coal, grain, or oil. This is cheap transportation. Barges can pass along the entire 650 miles of the river system.



Each dam in the valley has a powerhouse and generator. Water stored behind the dams turns the generators. They make the electricity.

People in the valley began to use the electricity. They wanted more. So TVA decided to produce more power. It is building some nuclear power plants for the area.

Electricity is an important tool in building up a region. It can pump water, help milk cows, cook, clean, warm, and cool. It brings the comforts of modern life into the homes. Since electricity is so important, the price should be as low as possible. Then, many people can use a lot of it. TVA produces the electricity and takes very little profit for itself. This keeps the price low.

The people in the valley use twice as much electricity as those in other areas. They pay only half as much for the electricity.

TVA dams, and their lakes, make the region one of the country's most beautiful playgrounds. People come from all over the country to fish. They come to boat and swim in the lakes.

TVA shares its knowledge with people throughout the valley. TVA works with agricultural colleges. Farmers are shown how to improve their farms. This program has been very successful.

The TVA also improved forests. Half the land in the Tennessee Valley was once forested. In the 1930s, people cut down the trees, and they did not plant new ones. There were fires, and thousands of trees burned. A great resource was wasted. TVA worked with the state and local governments in the valley. They set up better control of forest fires. They planted seedlings. They managed the woodlands better. That work is now paying off.

Today progress in the Tennessee Valley is steady. There is water pollution and air pollution, but the people are hopeful about solving these problems. Not so many years ago, the people felt helpless. There seemed nothing they could do. But TVA gave them confidence in the future.

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REGIONS OF THE UNITED STATES

Hole in the Rock

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Adapted from *Hole in the Rock* by David E. Miller, published 1969 by University of Utah Press.

Hole in the Rock

David E. Miller

There were more than two hundred of us—men, women, and children. We had been selected by our Mormon church to start a new community. We were going to found a mission in the San Juan River area in southeastern Utah.

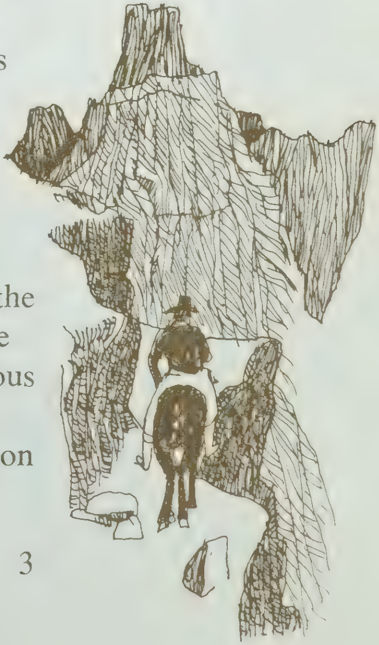
We knew little about that part of America. We were not sure how to get there. But we were proud that we had been chosen.

Our faith in God and in our Mormon brothers kept us from being afraid. We believed it was our duty to open up this new land. We would farm and raise our herds. Most important, we would bring our faith to the Indians of the new region.

In October of 1879 we said goodbye to our neighbors. We took a last look at our farms and homes. Then we set out on our journey. It took nearly four weeks for all of us to meet at Forty Mile Spring.

Scouts went ahead. They reported back that it was the worst-looking country they had ever seen. How were we to build a wagon road to cross the deep and dangerous canyons of the Colorado River?

Scouts had seen a narrow crack in the Glen Canyon wall. We called it Hole in the Rock. The scouts felt



that it might be possible to blast away enough rock to make a narrow road through the hole.

Silas S. Smith was the leader of our group, and he would make the decision. We all knew that he would seek the advice of many men. We decided to push on and try to get through.

It was snowing. We began to sing our favorite Mormon hymn.

Our wagons had to travel over sixty-five miles of very rough country. Sometimes we would not see a gorge until we were at the very edge of a drop several hundred feet deep.

It took many weeks to get to Hole in the Rock. When we got there, we were cold and tired. There was little food for us, or for our cattle. There was not much wood for fires.

We knew what had to be done. The crack in the canyon wall had to be widened enough to make a road at the bottom of the canyon. Then the wagons could get down to the river.

We needed a ferry to get us across the river. Then we had to build a road on the other side to get our wagons out of the canyon.

We divided into work groups and went in search of materials. Three months later, work crews were all back in camp. We were ready to go through the Hole in the Rock. The wagons lined up, ready to go. Now was the time of greatest danger.

J. Stanford Smith worked at the Hole all day. He helped each wagon start down the steep slope to the river. Sometimes he had to hitch a horse or mule to the back of a wagon to hold it back. He watched the women and children clasp hands and slide down the slippery rocks. The animals' feet were bleeding and large mats of their hair were torn off by the rocks.

The wagons got safely through, and Stanford looked around for his family. They were not in sight. He dropped his shovel and climbed to the top. There he found his wife, Belle, and his children. They were sitting in the wagon at the top of the cliff.

"Stanford, I thought you'd never come!" Belle said.

"I was helping people get their wagons on the raft," he said. "I thought somebody would bring my wagon down. Drat 'em!"

"I've got the horses harnessed. Everything's packed," Belle said.

They started down. Stanford jumped out to rough-lock the wagon wheels. Belle got out to help.

Stanford took her arm. They walked to the edge. Hand in hand, they looked down. The road was as steep as the roof of a house. It was only as wide as the wagon. Below that a dizzy slide led straight down to the landing place. But the bad part was that first drop of 150 feet.

"I'm afraid we can't make it," he exclaimed.

"We've got to make it!" she answered him firmly.

They hitched a horse to the back of the wagon to help hold it back. They decided that Belle was to pull back on the reins while Stanford drove the wagon.

"What about the children?" he asked.

"We'll have to come back for them."

Belle folded the quilt and laid it on the ground. She set three-year-old Roy on the quilt and put the baby between his legs.

"Hold little brother till papa comes for you," she told him.

Belle told Ada to sit on the quilt with her brothers. She kissed each one and tucked the quilt around them.

"Don't move, dears. Don't even stand up. As soon as we get the wagon down, papa will come back for you!"

Ada turned to her father. "Will you come back, papa?"

Stanford could only nod and turn away in tears.

"Then I'm not afraid," Ada said.

Stanford told Belle to hold the horse's reins. "Pull back as hard as you can," he said as he got on the wagon.

"Here we go. Hold tight to your lines," Stanford said to Belle. She turned to smile at the children.

"We'll be right back," she called to them.

Stanford braced his legs against the dashboard, and they started down. The first lurch nearly pulled Belle off her feet. She dug her heels in to keep her balance. The horse was thrown on his haunches. Belle pulled back with all her strength. Sand blinded her. She gritted her teeth and hung on to the lines. A jagged rock tore her flesh. Hot pain ran up her leg. The wagon struck a huge boulder. The jar threw her against the side of a cliff.

The wagon stopped. Stanford leaped to the ground. They had made it!

He looked at Belle. Her clothes were torn and stained with blood. But she was all right. She smiled. He could never have done it without her help.

Stanford lifted his hat in salute to his brave wife. Then he started up the cliff for the children. He heard them calling. He answered them. He and Belle had made it through the Hole alone. Now everything would be all right.

Elizabeth Morris Decker was another traveler on that difficult journey. She wrote about it.

She wrote that, looking back, she wondered how it was all possible. Not a single wagon overturned. Some chicken coops broke loose. The poultry flew around the canyon. Later they were all caught.

She felt, as did many of her companions, that without God's help they could never have completed the journey.

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Conversation with Mr. Redd

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Conversation with Mr. Redd

Lawrence Senesh

I came to La Sal, Utah, to talk with Mr. Charles Redd. I hoped to learn why his father had come to this lonely part of Utah.

Mr. Redd walks into the room. He is a tall, handsome man with white hair. He has piercing, clear blue eyes. He greets me kindly.

"My parents were called here by the Mormon church. White settlers had not yet come here. This part of Utah was cut off from the rest of the state by the Colorado River. Only Indians and outlaws lived here.

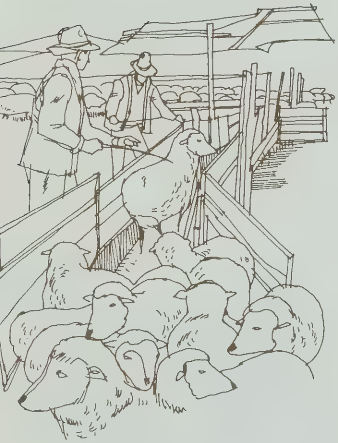
"Brigham Young led our people into the Salt Lake area of Utah. He was always looking for new places for his people to live. He started many new farming communities.

"Brigham Young and other Mormon leaders planned to send Mormon settlers to southeastern Utah. They hoped to find good open land to start new farms and ranches. They also hoped to spread the Mormon religion among the Indians.

"My father and his family came here with the Hole-in-the-Rock group of settlers. After months of hardship they arrived in the San Juan region. It was a lonely, dangerous place.

"Indians were unfriendly. The land was dry and barren. Some people thought it was hopeless. But the church leaders said the place was important. They hoped the settlers would make friends with the Indians and have successful farms.

"Finally things improved. The people were thrifty and hardworking. More Mormon settlers came into the San Juan region. The farmers irrigated their land from the San Juan River.



"My father had good credit. So he borrowed money to start a sheep and cattle ranch. He and some other men joined to invest their money. This is how my father started the Redd Ranches. He managed wisely. He changed his small farm into a large and prosperous ranch.

"My father died in 1923. He left the ranch to me. It was heavily in debt. But by working hard I paid the debts. The Redd Ranches cover 76,000 acres of land. Ranching here in Utah needs a lot of land.

"Our livestock run on the mountain pastures in the summer. In winter they stay down on the semidesert land.

"The land is covered with sagebrush and with piñon and juniper trees. There are flat and sloping mesas, cut by deep canyons. It is lonely country.

"Utah became a state in 1896. Utah agreed that all land not owned by people or local governments should belong to the federal government.

"Our ranch uses 1.5 million acres of federal land. Grass is thin here. Cattle must wander far to find enough of it. So we must use federal land. We must pay a fee to graze our cattle. We must also have a permit.

There are rules about the number of cattle that we can graze on federal land at one time.

"We raise cattle and sheep on our ranches. They are on the range all year. These animals produce beef, lamb, and wool.

"Ranching is not an easy business. The cattle must be moved from the desert in May and June. They are moved up to mountain areas where there is more water and grass.

"Cattle can travel these distances very well. They seem to know when to rest and when to travel. Cowboys guide the cattle from range to range.

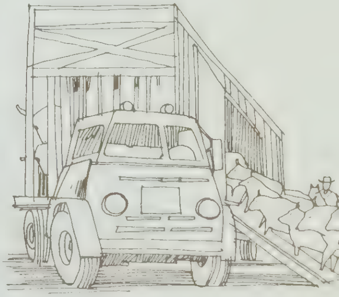
"Sheep need to be herded. There must be a good sheepherder who cares about sheep.

"We sell our wool in Boston. Most of our lambs go to Denver. The meat is used to supply the Midwest. Some lambs and calves go to the alfalfa fields of Arizona. Sometimes they go on trucks to Texas or Oklahoma to be fattened.

"Calves now go to market sooner than ever before. They used to stay on the range from two to five years. Now, most of the cattle leave the ranch when they are only eighteen months old.

"Ranching today is a challenging business. One problem is to get good workers on the ranch. It is hard to find experienced men. The work is hard. Cowboys still have to live on the range. They are away from their families. They must often sleep in tents. Most men would rather work nearer home.

"Another problem is how to produce lamb, beef, and wool more cheaply. We have to haul grain, transport cattle, and pay labor. Every year this costs more.



But the market prices do not increase at the same rate.

"We must compete with meat brought to the United States from Australia and Argentina. The production costs are lower in those countries. Their meat can sell at lower prices than ours. And they can still make a profit.

"One of our worries is over the use of public land. We need to graze our cattle on public land. This land was once forgotten land. No one wanted it.

"But now many people are taking an interest in this land. The federal government is turning large areas into new national parks. This cuts down our grazing land. It's fine for people to have national parks. But why can't land be used for more than one purpose at a time?

"I believe land can have many uses. It should be used for recreation. It can also be used for timber, mining, and grazing—all at the same time.

"Ranchers have at times allowed too many cattle to graze at one time. Miners and lumber companies have also used the land carelessly. The federal government should make more laws to protect the land.

"Ranching is getting more and more expensive. More land is needed for ranches. And land is expensive. Machinery is expensive. A man now must be rich or inherit land in order to start a ranch. We must find a way for people to enter ranching without such a large capital investment.

"I love the mountains and the desert country of the San Juan. My best days are when I travel on my horse through this beautiful land.

"I get great pleasure in improving the range. I like to plan how to use it best. It's wonderful to see healthy cattle on a grazing range. These are the things that make ranching worthwhile.

"I often think of my father and those early Mormon settlers. It was their faith and courage that made this region. Without their belief in God, they would never have made it."

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REGIONS OF THE UNITED STATES

The Trading Post and Pinto Beans

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"The Trading Post" adapted from "Hubbell Trading Post—National Historic Site" by Jo Jeffers, *Arizona Highways,* September 1967. By permission of Jo Jeffers Brown.

The Trading Post

Ceanne Mitchell

A potbellied stove stands in the middle of the store. Around it, the Indians stand and talk. Over their shoulders lie the warm, beautiful Navaho blankets of red, white, and black.

It is winter. The Indians have traveled many miles to the store. They enjoy talking and crowding around the stove in the "bullpen" of the store.

Saddles, bridles, and harnesses hang down from the dark hand-carved beams of the ceiling. Sacks of flour, sugar, coffee, and pinto beans stand against the walls. The shelves are loaded with food.

This store is the most famous trading post in all the Navaho country. Everything the Indians need from kerosene lamps to tallow candles and iron skillets can be bought or traded in this store. It is the trading post of Juan Lorenzo Hubbell at Ganado, Arizona. Juan Lorenzo began his post in 1876. By the year 1900, he was the most famous of all Indian traders.

When Juan Lorenzo Hubbell opened his trading post, he decided he would not trade in a tent or a lean-to. He wanted to build a trading post that would last.

Juan Lorenzo was born in New Mexico. He grew up speaking both Spanish and English. He wanted to get along with all those who lived in the Southwest: Spanish, Indian, and white American.

When he first opened his trading post, one of the Navaho walked into the store, picked up a sack of flour, and walked out without paying for it. Juan Lorenzo jumped over the counter, caught the Indian, and wrestled him to the ground.

About 70 other Indians were watching. Hubbell twisted the Indian's ear until the Indian let go of the flour. Then, Juan Lorenzo looked at all the other Indians and said, "I'll twist the ears off any Indian who steals from me!"

A short time later, a small band of Navaho came to the trading post. They dragged Hubbell outside and tied him to a wagon wheel. Just then, an important Navaho named Many Horses rode up. He knew of Juan Lorenzo.

Many Horses told the other Indians, "Why do you want to kill this man? He is our friend." Many Horses cut Juan Lorenzo free.

From that time on, Hubbell became a friend of the Navaho. They gave him a new name: *Naki Saani,* or Old Mexican.

Juan Lorenzo tried to help the Navaho. He encouraged them to get better shearing tools for their sheep. He told them to bring in more wool; it could be sold to merchants in the East. In 1871, the Navaho marketed just a few pounds of wool. By 1890, they sold two million pounds of it.

At Hubbell's trading post, the traders and Indians learned together to do most of their business without money. At first, they used a simple barter system. The

Indians would bring in wool and hides and handsome blankets they had woven. In exchange they were given food, cloth, tools, pans, harnesses, and clothing.

At certain times of the year, hides were scarce and there was little wool. But the Navaho still needed food, shoes, clothing, and all the rest. So the traders began to give the Indians credit. All winter, the Indians could get things at the store. In spring, they would pay off their debts with the wool they sheared from their sheep.

In summer, the Indians again bought on credit. In the fall, they would bring in lambs, sacks of piñon nuts, and hand-woven blankets to pay off their summer debt.

If an Indian needed something extra to meet an emergency, he could pawn some of his beautiful silver and turquoise jewelry. The trader would advance an Indian the goods he needed and would hold the jewelry. When the Indian repaid the advance, the trader returned the jewelry.

The Indians almost always paid their debts promptly. If they did not, they knew that they could no longer trade at the post. Even more important, they knew their honor depended on paying their debts.

Hubbell's trading post became one of the most popular places in all the Navaho country. Twice a year, there would be a great trading fiesta. The Indians would bring their wool and lambs, their piñon nuts, and their blankets. They would stay at the campgrounds at Ganado for three or four days.

Juan Lorenzo knew that there was a market for Indian jewelry. But few of the Navaho were able to make it. So Juan Lorenzo brought a silversmith from Mexico who taught the Navaho to make silver into

beautiful bracelets, earrings, and necklaces. He also encouraged Navaho women to weave handsome rugs. The Navaho patterns have become world-famous.

Juan Lorenzo Hubbell died in 1930. But the Navaho did not forget their friend. Neither did the United States government. On April 3, 1967, the National Park Service declared the Hubbell Trading Post at Ganado a national historic site.

The Park Service will continue to operate the store as a center of busy trading activity. Guides will show visitors the Hubbell home, the old bullpen, the rug room, the corral, the barns, the warehouse, and the spacious grounds. And the post will remain as a memorial to the friendship between trader Juan Lorenzo Hubbell and the Navaho Indians.

Pinto Beans

Howard Armstrong

In summer the land along U.S. Highway 160—in the Four Corners Region—looks like a rolling green sea. Large leafy plants seem to rush in the windlike waves to the brink of rocky canyons. These plants are those of the pinto bean. More pinto beans grow in the Four Corners Region than in any other place in the world.

Pinto beans are colored tan and sprinkled with dark-brown spots. They are used in Mexican food throughout the southwestern United States. Visit any farm or ranch home in the Rocky Mountain states and you are likely to find a pot of them simmering on the stove.

Pintos represent an average cash value of about four million dollars a year in the Four Corners area. The beans are planted in rows three feet apart—usually in early June. They bloom in July. In late August, leaves of the plants turn yellow; groups of five to ten beans appear on the slim branches of the plants.

A pinto farmer must have a gambler's nerve, strong faith, and a master's skill if he is to successfully grow beans. From the time his seeds are in the ground, he must take good care of them. Frosts can come early and damage the beans. And the plants must have moisture at just the right time.

The importance of pintos in the Four Corners Region is dramatized each fall. A pinto bean cooking contest has become part of the Four Corners Harvest Festival. Most cooks think of beans in terms of chili beans, refried beans, and so on. But at the pinto bean cooking contest, the pinto is glorified. One year, the grand award was won by a woman who made pinto bean mock chicken legs. Other winners have made bean pie, pinto bean muffins, pinto bean cake, and chocolate bean candy. These prize-winning recipes have been put into a cookbook. Now people all over the United States can taste the pride of the Southwest: pinto beans!

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The Rand Corporation and The Story of Orange County

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The Rand Corporation

Robert Specht

In Santa Monica, California, not far from Disneyland and Hollywood, is the Rand Corporation.

Five hundred people work for the Rand Corporation. Some are engineers. Some are scientists. Lawyers and language experts work there. Other kinds of people work there. Why do so many kinds of people work there? What does the Rand Corporation produce? It produces a service. The service is helping to solve problems. Rand is a research organization. It is known as a "think tank."

Who buys Rand's services? The United States government does. City governments do. Rand stands for Research and Development. It was started as a project by the U.S. Air Force in 1946. Its purpose was to study ways of waging warfare other than by ground armies. In 1948 Rand became an independent company. It studies many other problems besides national defense.

Rand employes many social scientists. These scientists specialize in studying the workings of society. Sometimes only one expert will work on a problem. More often different specialists make up a team. Then they work together on a problem. Each member of the team studies one part of the problem.

Then they bring their findings together. They make a report and give their advice on what to do about a problem. One team of scientists may study the problem of poverty. One specialist might study what poverty does to a family. A social scientist on the team may study how poverty affects health. An economist may study how poverty wastes human talent. A lawmaker might study how poverty causes conflict between groups.

An arctic explorer-scientist is studying the polar ice pack. What would happen if the ice melted? What would happen to the world's climate? Weather experts work with him as a team. They also study how exhaust from cars and airplanes affects climate. How do smog and dust affect our climate?

One man works with a big computer. He is studying these questions: How do the turning earth and winds cause ocean currents? Why do some currents carry warm water? Why do others carry cold water? Why do these currents flow in certain directions?

There is a large group of people who specialize in government and politics. One team may study the Soviet Union. Another may study the countries of Asia.

About fifty Rand specialists are working in New York City. They are helping that big city solve its problems. There are problems of fire and police protection. There are problems of housing, health, and water pollution. The specialists hope to find ways to improve life in the big cities.

When Rand experts finish their study of a problem, they write a report about what they discovered.

The Rand Corporation has given much help to California. That state has many problems.

The population has grown by more than eight million in less than twenty years. This rapid growth has caused problems.

There aren't enough houses and schools. There aren't enough doctors and hospitals. There isn't adequate public transportation.

California is rich. This fact causes problems. There are so many cars! There are so many airplanes and industries! They create problems of air and water pollution.

Rand's experts offer information on how to solve these problems. They offer advice. Advice and information are important to have. But they are not enough.

Someone must put these ideas to work. In a free society, that someone is you. It is all the other people in our country.

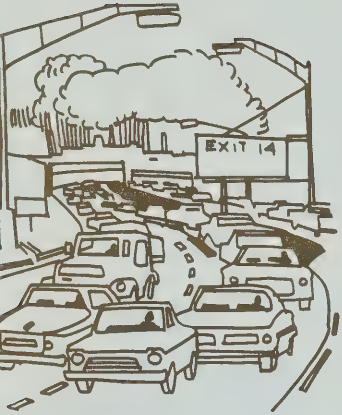
We must see the problems around us. We must care enough to do something about them. We must put the scientists' ideas to work.

The Story of Orange County

Eleanor Young

Bob Anderson and his family are modern immigrants. They are among the thousands of people who move to California each month. Most people who come do not want to live just anywhere in the state. They want to live in southern California. The Andersons came to Orange County.

Bob Anderson was sent to California by his company. He was made manager of the company's new branch office.



The Andersons live within walking distance of school. The beach is ten minutes away by car. Mrs. Anderson can drive into a market, dairy, restaurant, gas station, or bank without getting out of her car. The Andersons like Orange County. But they don't know how long they will like it. People keep pouring into the county. Traffic jams are getting worse. Smoke and fog are getting thicker.

But what is happening to Orange County is happening to communities across the country. In 1950, Orange County consisted of small towns, farms, and some industries near Los Angeles. In the 1950s, people began to move into Los Angeles. They came from all over the country. Downtown became crowded. People wanted to move farther out. New freeways opened, so people could live far from their offices.

Land developers built miles of new homes in Orange County. Developers know the route of the immigrants. They buy up land from the farmers. Then they sell it at a profit when the immigrants arrive.

People like clean, fresh air. They want lots of room to bring up children. They want a country atmosphere. The first home buyers in Orange County found land surrounded by sweet-smelling orange groves and bean fields. But many farmers have sold their land, and there are few fields left. Now the home buyer finds his home surrounded by miles and miles of other homes.

Not all the farmers wanted to sell their land to developers. But the families around the farms wanted more city services. Taxes got so high that many farmers could not afford to farm any longer. They sold their land and left.

Some of the new communities became cities. They sought new industry and business.

Modern immigrants like Bob Anderson and his family still enjoy Orange County. But they know now that constant effort will be needed to keep it beautiful.

City planners are asking businesses to make the land prettier around their factories. They hope more trees will be planted. They hope more parks will be built. They warn that the progress of the county must be planned and watched. Otherwise, they say, the factories, the crowds, and the people will ruin the beauty of Orange County.

Social Science Satellite Kit

REGIONS OF THE UNITED STATES

The Battle over the California Water Project

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The Battle over the California Water Project

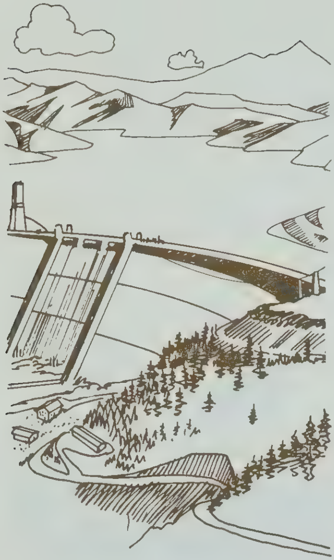
Marg Donnelly

In 1959, California lawmakers voted to build a state water project. In 1960, California's voters approved the California State Water Plan. It is known as CWP for short. But now in the 1970s, some Californians want to stop CWP. They say it is costing too much money. They claim the benefits will be less than the people were told originally. These people have lawyers. Several lawsuits are in the courts.

How can people fight a law that has been passed? What is the fight all about? Why has CWP divided people in the state?

The reason behind CWP is that three out of four Californians live in southern California near huge cities like Los Angeles and San Diego. But most of the water in the state is in the north.

The California Water Project was designed to take water from northern California and move it through canals and aqueducts to central and southern California. The water would come mainly from the Sacramento River and its branches. Dams and reservoirs would collect and store water in the north. Pumping plants would move water through aqueducts hundreds of miles to southern California.



Some of the plan has been completed. A giant dam has been built in northern California. Aqueducts and reservoirs have been constructed. But the project has run out of money.

In 1959, planners said that the project would cost $2 billion. Now, experts say that it will cost closer to $8 or $10 billion.

A large part of this money comes from property taxes in California. The federal government also is paying for part of the cost. This means that taxpayers throughout the United States are helping to pay for CWP.

People against the plan say that the costs are greater than the benefits. They say that for every dollar spent on the project, only $.59 will be received in benefits. In addition, the state is losing money on interest. California made a loan of almost $2 billion to the project. The loan is interest-free. That means that the state will not earn the interest it could have made by keeping its money in a bank. The money it could have earned in interest might have gone for schools and other needed projects.

Other groups against the plan are worried about the costs to the environment. They claim that in 1959 people did not worry about costs to the environment. Now they do.

These groups say that the whole Sacramento River region will suffer. The project will disturb the wildlife. It will pollute the waterways, forcing many people to leave the area.

Some people will be directly affected by the project. When the project is finished, there will be less water in the Sacramento River. That means less fresh water will flow into San Francisco Bay. This will cause more pollution in the bay. Salt water from the bay may seep upstream because there is less pressure from fresh water to hold it back.

People who earn their living from the bay will suffer. Commercial fishermen will not find as many fish. Boatowners who rent sport-fishing boats will lose business.

The farmers who live near the lower Sacramento River fear salt water will get into the river. Salt water kills crops. They fear their farmlands will be ruined.

People who love wild plants and animals are worried. Fish and birds live on the natural food in the region now. When the river and bay change, there will be less food. Insects and plants will die off. Some fish and birds will leave for new breeding and feeding grounds. Many will die.

Many of the people who want the CWP live in southern California. The south has beautiful sunlight, but it is dry and dusty. Their land needs water. Otherwise it is of little use to them.

Southern Californians need water to irrigate the land for farming. Water also attracts large industries. Large industries bring in people. Growing towns need water. Water can increase land prices $1,000 an acre or more.

Southern landowners form a powerful interest group. Their power persuaded the lawmakers to start the CWP.

But now the northern interest groups which are against the CWP have gained strength. The fight is on in the courts.

The people against the CWP are the *plaintiffs* in the lawsuit. Plaintiffs are the people who ask the court to hear a civil case. They will have to show a judge why the plan should be stopped. The people for CWP are the *defendants*. The defendants have to show the court why CWP should not be stopped.

Actually, the lawyers for the plaintiffs and defendants do all the work. The lawyers for the plaintiffs have to make the first move. The lawyers cannot use just any reason to oppose CWP. They can use only good legal reasons.

To find good legal reasons, they tried to see whether CWP had broken any laws. They found that:

- Planners for CWP must get approval for the whole project. They did not.
- Two studies on the effects of CPW on the environment and on wildlife are required by law. The studies were not completed.
- The drain of water from the San Joaquin Valley will deposit poisonous waste water into the delta waters. It is against the law to pollute the delta water.
- There is a law that says that water paid for by federal money cannot be used to help farmers with very large farms. Most of the farmers helped by the CWP have large farms.
- The federal government has said that it will be a leader in protecting the environment. In this case, it is not protecting the environment.

None of these complaints will stop the CWP, but they may change it. Here are some possible changes:

- If the required studies are completed, they will be shown to Congress. The studies will show that CWP will have bad effects on the environment. Most voters are concerned about the environment. Voter pressure on congressmen in Washington may keep them from approving federal money for CWP. Without federal money, the project cannot go on as planned.

- The canal which is planned to carry water from the source of the Sacramento River has not been built yet. If money does not come from the federal government, plans for the canal will be stopped or changed. In this way, plaintiff lawyers hope to limit the amount of water sent to the south.
- The studies probably will also show that the pumping plants will let more salt water seep upstream. The plaintiff's lawyers hope the court will say that the pumping plants cannot be used.
- If the court agrees that the drain will pollute water, it can order that the water be purified before it leaves the drain.
- If the court agrees that federal money should not pay for water for large farms, they will not receive any more water than small farms get. That would cut down the demand for water in the south.

Lawyers for the plaintiffs have sent their complaints to a judge. Since laws can be understood in different ways, the defendants' lawyers have answered these complaints. They have explained to the judge why they think the laws do not apply in their case. The judge will decide if the laws do apply. If they do apply, he will set a date for the case to come to court. Before this happens, however, the two sides may come to an agreement among themselves.

So far, there is no decision on the future of CWP. If you live in California or nearby states, your newspapers will have stories about decisions as they are made. Watch for them.

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Oil and Water Don't Mix

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Oil and Water Don't Mix

Frank Tyson

On February 6, 1968, the United States government made an important decision. It permitted twenty-six companies to drill for oil off the California coast near Santa Barbara.

The oil companies were quite happy. That part of the ocean bottom is very rich in oil. They could hardly wait to start. They planned to sell the oil in their service stations, and this would increase their profits.

The government was also pleased. It would receive a part of these earnings in taxes. Since the oil earnings promised to be very big, the government could expect more than 1.5 billion tax dollars from these oil companies in one year.

Americans move around a great deal. Their cars need lots of gasoline. Surely everybody should have been happy on that February day in 1968. But everybody was not happy. Some people in Santa Barbara were worried.

The people of Santa Barbara liked their beautiful beach. They did not want anything to happen to it. If something went wrong with the drilling equipment, people feared oil might escape into the ocean and pollute their beaches.

The oil companies said not to worry. They knew how to drill so well that nothing could happen. Government officials also promised to check on the drilling and make sure that nothing went wrong.

About a year later, one of the underwater oil wells blew up. It went off like an undersea volcano. It spat out thousands of gallons of oil. Oil company workers tried plugging cement into the hole. The well kept on spitting. A big, black oil slick lay over the blue waters of the Pacific. Each day it grew bigger. Finally it covered eight hundred square miles of once blue ocean.

After a week, the wind changed. It began to blow the oil slick toward the shore. The slimy mess began to roll up on Santa Barbara's beaches.

Hundreds of men went to work. They spread straw on the beaches. As soon as the straw absorbed the oil, they picked it up and shoveled it into waiting trucks. People worked day and night. But the oil rolled in faster than they could pick it up.

Finally, the oil company workers managed to stop the leak. The damage was terrible. It reached far beyond Santa Barbara. Forty miles of the California coastline were covered with a thick layer of bad-smelling mud. Even the people who lived inland could smell the oil.

A few days later the ocean bottom burst open again. The well had been filled with cement. But the oil broke out in other places.

At first, government officials would not allow chemicals to be sprayed on the ocean. Then they changed their minds. They hoped the chemicals would dissolve the oily blob, so boats and planes began to spray chemicals. Then the officials were afraid they would make the mess worse. So they stopped the spraying.

The oil companies and government officials were worried. The harder they tried to control the mess, the worse it got. They did not know what to do.

Wildlife was threatened. Birds tried to clean one another's feathers with their beaks. But they got the oil in their mouths and eyes. Some people rushed birds to emergency animal centers. There they cleaned and carefully wrapped the birds to keep them from catching cold. For thousands of birds, the help came too late. Only one out of every five birds survived.

The oil killed mussels, clams, and lobsters. It reached the islands off the coast of Santa Barbara, and it endangered the lives of thousands of elephant seals, sea lions, and the rare sea otters. Even giant whales were found dead on beaches hundreds of miles away.

One hundred days after the well first blew up, it was still spitting. No one knew when it would stop. Perhaps it would never stop. A deep anger came over the people of Santa Barbara. Never before had the town been so united. People agreed that something had to be done. They formed an organization called GOO: "Get Oil Out." They asked the government to stop the drilling off their coastline.

The schoolchildren helped. They took time out from their holidays and collected the sticky mud. They put it into bottles and sent it to congressmen in Washington. The congressmen could see for themselves how ugly the oil slick really was.

The oil slick hurt Santa Barbara economically. Many people felt that the government and the oil companies should pay them for the damages. The city's fishing industry suffered badly. The motel and restaurant owners were losing money. Santa Barbara had always been a popular tourist spot; the town was noted for its beauty. But no tourists wanted to go there anymore.

The oil slick angered people in foreign countries as well. People wrote letters from as far away as Switzerland and Australia. A hundred thousand people signed a petition. They asked the president to stop the drilling off the Santa Barbara coast. GOO became an organization with a national cause: Save a beautiful coastline for the people of America.

The people of Santa Barbara asked the government to leave their area alone and drill in places where natural beauty would not be spoiled. "What good is it for people to have cheaper gasoline if that means ruining the beauty of our country?" they said. "People need fresh air and open space to be happy. How can you tell how much money happiness is really worth?"

Some members of GOO discovered that the oil pumped from the ocean bottom near Santa Barbara was not really so cheap. If the government imported more oil from other countries, gasoline would be cheaper. Besides, the government owned some oil-rich California land in an area called Elk Hills. Elk Hills was not as beautiful as the Santa Barbara coast. The government could drill there.

Will the government accept this idea? Only time will tell. But as our population grows, there will be a great demand for more oil. If the government permits drilling wherever there is oil, America's beautiful places may be ruined.

President Nixon once said that people cannot be expected to love an unlovely country. If this is true, people must convince the government that cheaper gasoline is not worth the price.

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King Island Story

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Adapted from ARTISTS OF THE TUNDRA AND THE SEA by Dorothy Jean Ray, © 1961, University of Washington Press, Seattle, Washington.

King Island Story

Mary Pat Pierce

King Island is a rocky knob in the Bering Sea about 80 miles from Nome. It is well known for its brave Eskimo hunters and its skillful carvers of ivory.

During the nine coldest months of the year, the people of King Island live in the old Eskimo fashion.

The men go out in their skin-covered boats. These boats are called umiaks *(oo-mee-acks). They hold eight or nine men. The men hunt walrus, seal, and whale.*

The women prepare and sew the skins of the animals. They cook the meals and care for the children. They fish through holes cut in the sea ice near the shore.

During the long evenings, the men and boys of King Island gather in the kazgi, *or men's house, to carve ivory. For hundreds of years, Eskimos carved tools from the ivory tusks of the walrus. From these tusks, they made knives, harpoon points, and needle cases.*

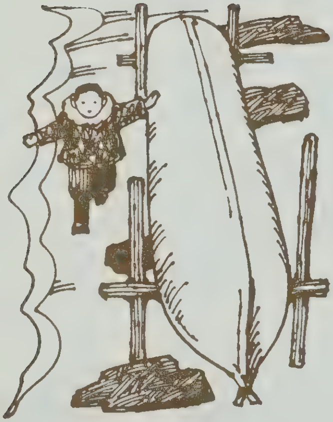
Today, King Islanders continue to make ivory objects. But instead of tools, they carve jewelry. They carve small figures of Alaskan animals and birds to sell to tourists.

During the brief summer, the King Islanders move to the mainland. They live in King Island Village, east of Nome.

While they live in King Island Village, the women fish in the rivers in the area. They sun-dry the fish to use for food during the winter. They also pick berries.

Some of the men take summer jobs in Nome. Other men and boys continue to earn small cash incomes by carving ivory, jade, and wood souvenirs.

This is the story of a King Island boy.



Mike Oowak sped along the beach, sand fanning out from his boots with each running step. As he passed an overturned umiak, he gave it a joyous thump with the flat of his hand. The tightly stretched skin over the wood frame gave back a deep drum tone.

Mike was happy. The summer was ending. Soon his family would return to their King Island home for the winter. He had an added cause for happiness. Yesterday his father put one of Mike's carvings on the table with all the other carvings offered to the tourists for sale.

Seldom does an elder accept a boy's carving as a finished piece. Almost always a father will look at his son's carving and say, "Not so good yet. I have to teach you to do better carving."

Mike had carved a small seal from a piece of ivory walrus tusk. Part of the tusk's brownish center was visible. Ivory that shows this dark center is not thought to be very good ivory. It is good only for boys to practice on.

If an experienced carver has to use such a piece, he usually plans the work so that the dark part is on the underside of the figure he is carving. Then it could not be seen very well.

When Mike began to work on his piece of ivory, he thought it would be interesting to let the darker color of the ivory fall across the seal's shoulders. His father showed him which hacksaw blade to use to make his first cuts into the block of ivory. His father said nothing as the seal took shape with the dark pattern across its shoulders. How else would a boy learn to carve?

Only when the seal was finished did Mike's father realize how much his son loved ivory. Only then did he realize how much skill Mike had. He had used the colored ivory in a way that added to the beauty of the carved piece. It was certainly good enough to be sold to the tourists. Proudly Mike's father put a price tag on the carving.

How Mike hoped the seal would be bought! This year the family needed money. The summer's salmon fishing was not good. The family had to buy a lot of their food.

Many of the tourists who stopped at Nome had bought ivory carvings at other stops earlier on their trip. Only those who had already heard of King Island's carvings waited until they came to King Island before they bought.

Now, as he ran along the beach, Mike was hoping his seal had been sold. He was hoping he would not find it on the table when he went into the kazgi used by the carvers.

He ran past the motors, paddles, and gasoline cans that were jumbled together along the side walls of the building. He entered the building, and his heart sank. The little white seal with the dark shoulders still sat there. No one had bought it. But the day was not over. Other tourists might come. They might buy Mike's seal.

Mike joined the men. They sat quietly at the back of the kazgi near the windows. The ivory carvers sat on the wood floor. One man stripped the tough outer coating from a walrus tusk. He used an adz. An adz is a sharp, strong cutting tool. Perspiration ran down his face.

A second man was shaping an ivory polar bear's back. He used a round file. His four-year-old son was playing with his toolbox. The father gave him some sandpaper. He told him to polish a walrus tooth with it.

The men worked through the morning. From time to time, they talked of the poor fishing. They spoke about poor sales. One of the government men was with them. He said they should stay on the mainland through this winter. He said life would be better on the mainland than on King Island.

"Take jobs in Nome," he said. "You can carve ivory at night. Your children can go to school in Nome. Your wives can have their babies in the hospital. It is better for you to live there."

Mike knew his father wanted to return to King Island. His people had lived there for hundreds of years. He knew that his father loved the excitement of going out to sea in boats with the other men. In those boats they hunted whale. They hunted seal and walrus.

Why, then, did his father always listen carefully to the government man? Mike began to worry.

These white men always talked of schools. They talked about doctors and hospitals. They talked of a better way of life in Nome. They kept saying how cold the winters were on King Island. Well, there was the snow, ice, and freezing ocean wind. Still, Mike liked it.

As the government man talked, Mike's father nodded. The children would be better off on the mainland. It might mean a chance for them to go to school. They might even go to college. This could mean a better future for the whole family. Mike's father nodded again. Perhaps he and his family would stay on the mainland this winter.

Morning passed. In the afternoon a small group of tourists came to the kazgi. They bought only a few pieces of carved ivory. No one bought Mike's seal.

The happiness that Mike felt that morning was gone. He put his carving and his tools in his father's toolbox. He walked to the doorway of the kazgi. He stood there, staring out at the Bering Sea. Would his family stay on the mainland? He wondered sadly if he would ever see King Island again.

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Storyknifing

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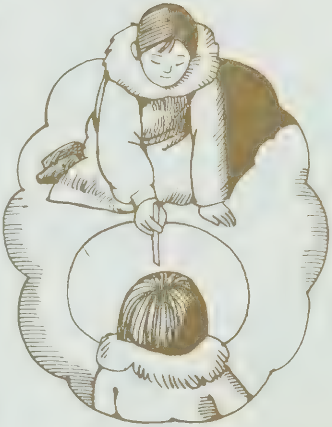
Storyknifing

Cathi Hankinson

"*Yaruiyarluk!*" That means "Let's go storyknifing!" in the Eskimo language.

Olinka Nicolai is a nineteen-year-old Eskimo girl from Kwethluk—a village on the Kuskokwim River. She used to spend hours storyknifing with her best girl friend.



Storyknifing involves finding a "secret" place. It might be on the seashore. Perhaps it's on a riverbank. But it must have a good mud surface. During the winter, a patch of smooth snow will do.

The two girls used to tell story after story. They drew pictures for each story in the mud or snow. And they used a storyknife.

The storyknife was always a special knife—carved of ivory, bone, or wood. It was used only for telling knife stories. Today, Eskimo girls may use just an ordinary table knife. But Olinka's storyknife was carved from a walrus tusk. Her mother's grandfather made it.

Olinka says that any story can be told with a storyknife. You just have to decide which parts of the story to draw. Eskimo girls learn how to make the drawings by watching the older village girls storyknifing.

A round house shows that the story is an old one. It represents the old Eskimo sod house. A rectangular house shows that the story is modern.

The storyknifer sees the inside of the house from above. It is like looking into a dollhouse when the roof is off. As each character speaks, the storyknifer makes speaking marks next to his symbol. When the speaker changes in the story, the storyknifer erases the whole drawing. She does this with the flat of her knife. Then she makes a new drawing to show the next part of the story.

Only Eskimo girls may tell storyknife stories. Little Eskimo children tag after the older girls. They watch and listen until they are chased away. Soon the little girls begin to tell their own stories. They get ideas from dreams and real life. Sometimes they just make things up.

When a girl gets to be 12 years old, she knows many of the old stories. She is also very skillful at making up her own stories. Of course, some girls are better at it than others.

People know that Olinka is one of the good storyknifers in Kwethluk. People think girls of 19 are too grown up to play as often as before; it is like getting too old to play with dolls. But now and then, as a special treat, Olinka will get out her storyknife and begin:

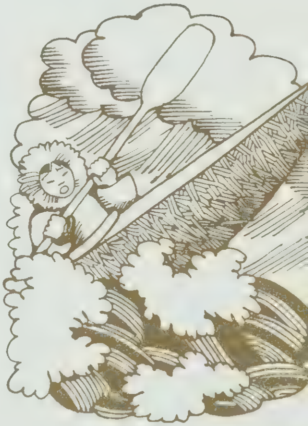
"Once upon a time, there was an old woman and her grandson. They lived all alone at one end of a large village. They had no relatives to help them get food or clothing. By working together, they managed to keep warm. They had enough to eat to keep alive.

"Each spring, the men of the village went out in their kayaks. They hunted seal and other sea animals.

This spring, they made their preparations. They left in twos. But they did not return. They disappeared! Now, only women and children remained in the village. Since the hunters did not bring food back to their families, the food supply got smaller and smaller.

"The grandson was the oldest boy left in the village. He was about 15 years old. His grandmother asked him to find the missing men. In the past, the village men crossed the open water to an island. Here they always stopped before they went to their usual hunting ground. Perhaps the grandson could find some sort of clue on the island. The old lady helped him pack his things for the trip.

"On the day that he was to go, she gave him a single strand of her own hair. She said to take good care of it. He did not know what it was for, but he kept it anyway. He always obeyed his grandmother.



"The kayak journey to the island was long. On the way, he was caught in a storm, and he was frightened. He did not know what to do. Suddenly, a voice spoke to him. It came from the strand of his grandmother's hair. It told him to be calm. It told him how to reach the island safely. He did as he was told and came safely through the storm.

"When he reached the island, he saw many kayaks on the beach. They belonged to the men of his village. He took his kayak up on the shore and began to walk around. He found a path and saw many footprints. He thought they must be the footprints of the missing men. He followed the path and came to a little dome-shaped hut made of sod. No one had ever told about a house on that island before. But it was such a

big island. The men might have missed seeing it.

"There was an old woman standing by the door. She asked him to come in. He looked about the room. There was a pile of bones by the fireplace. He saw nothing unusual about them. He sat down across from the old woman. They began talking. She was very friendly and she asked him to stay overnight. He agreed because he wanted a chance to look around the island for the missing men. She talked and talked and talked. He was too polite to interrupt, so he had no chance to look around. He did not want to hurt her feelings. He stayed and night came.

"Soon it was time to go to bed, but he was not sleepy. He told her that he could not sleep. She offered to play her flute for him. It was dark and she played, but he still could not go to sleep.

"Suddenly, he heard a sound. Swish! Swish! It seemed to be coming from the floor. He wondered what it was. Then the strand of hair spoke to him again. It told him not to move.

"The old woman kept playing. She did not seem to hear what the strand of hair was saying. The strand of hair told the boy that the woman was really a witch. Maggots were making the swishing sound. They were dancing all over the floor. If he made a move, they would know where he was and eat him up! All night the grandson lay perfectly still. But he couldn't sleep.

"Morning came. She stopped playing her flute, and the maggots were gone. He got up, and she was surprised to find that he was alive and well. She thought he would be just a heap of bones like the other men. She asked him how he did it. He would not tell her. But the woman knew that he had some power helping him. So she did not try to make him stay.

"When he got back to the village, he told everyone what had happened. From then on, he went to a different house each day and helped the people. He chopped wood, carried water, hunted, and fished. Soon the younger boys grew older and could help their own families. Life went on. But no one ever went to that island again."

Olinka and her Eskimo friends tell each other many similar stories. Olinka says that most of the stories are about a grandmother and a grandson. If he obeys and does not ask silly questions, he is the hero of the story. But if he does not obey, something bad happens to his grandmother and she never helps him again.

In these stories, Eskimo children learn from the experience of older people. This helps them to live with the dangers of the Arctic Region.

Social Science Satellite Kit

REGIONS OF THE UNITED STATES

The Inland People

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The Inland People

Michael Cline

North of the Arctic Circle and deep in the mountains of Alaska is a place called Anaktuvuk Pass. This is the home of 125 Eskimos. They are called the *Nunamuit,* which means "inland people" in the Eskimo language.

The Nunamuit live in one of the most rugged lands in the world. Mountains rise thousands of feet around them. The ground is frozen solid all year.

In winter, the temperature falls to 60 degrees below zero. It is always dark except for four hours of twilight between ten in the morning and two in the afternoon.

In the summer, the sun never sets. But summer only lasts for the month of July. Even then, snow can fall. Winter or summer, the wind never stops blowing.

The land has no trees, except for a few scrubby willows. During summer, the land is alive with color. There are tiny arctic flowers, berries, and colored mosses. But for most of the year the area is cold and lonely.

How did the Nunamuit get to Anaktuvuk Pass? Why do they stay there? How do they live?

Five thousand years ago, the first Eskimos came into Alaska from Siberia. They spread along the coasts of Alaska. They hunted and fished for food and

clothing. Some of these coastal Eskimos decided to move away from the seashore. They thought hunting would be better inland. So they moved into the Brooks Range Mountains. Gradually these people became known as the Nunamuit or inland people.

The Nunamuit did find better hunting in the Brooks Range. Each year, thousands of caribou passed near them. Caribou is a type of elk, and the caribou passed through the mountains twice a year. They migrated from the arctic coast in the north to their winter home in the Brooks Range. The caribou went through Anaktuvuk Pass.

The Nunamuit built their village at the pass. They caught plenty of caribou there, and they had enough to eat. Then they used the caribou hides for clothing, and they sold the skins to white traders.

The Eskimo word for white man is *tannik*. More and more tannik came to Alaska during the 1800s. The demand for furs increased. The Nunamuit saw the white man's goods for the first time. They wanted tea, tobacco, and copper pots. But they had no money. Instead, they traded skins of wolf and fox they had trapped.

For many years, Eskimos moved around the area of Anaktuvuk Pass in small family groups. Finally, they decided to stay in one place at the pass. This made it easier to trade with the white men. Planes could land on a nearby lake. Supplies could be brought in. Animal hides could be shipped out.

When the inland people settled down for good at Anaktuvuk Pass, they built a log church. In 1961, a new school was constructed.

The Nunamuit began to sell handmade masks of caribou skin. Mask making really began as a joke. Some men wore them to a Christmas dance. Visitors saw the masks and wanted some. So the Nunamuit went into business. Today each family makes about a thousand dollars a year on masks. Some families earn twice that much.

Some Nunamuit earn money working as fire fighters. Every summer, there are fires in the great forests of Alaska. The government flies the fighters to and from the forest.

There are other sources of income, too. Anaktuvuk Pass has a postmaster, a school janitor, and hunters' guides, among others. The average family of inland people earns about four thousand dollars a year.

The Nunamuit's biggest single expense is for the snowmobile—a sled with a motor. A snowmobile costs about a thousand dollars. Gas for it has to be flown in and costs two dollars a gallon.

As the Eskimo way of life has changed, his diet has also changed. Twenty years ago, caribou was the main food. Today, Eskimos eat the white man's more costly food. A case of canned milk is $16. After they have paid for necessities, Eskimos have no money left to save.

There are five small stores in Anaktuvuk Pass. Each store has a shelf only partly filled with goods. Eskimos find it cheaper to order goods from a catalog than to buy them at the stores.

Most people live in low, one-room sod houses. When they are covered with snow, they look like igloos. Some families can afford small plywood houses. The

average family of six sleeps together on a mattress on the floor. An oil stove heats the house. A lantern gives light. There is no electricity.

The father of a Nunamuit family hunts for meat and earns money to buy things the family needs. The mother takes care of the children, cooks and mends, and tries to keep the house clean. Children have few chores; after school they play games.

The children like school. Even if some things are strange to them, they are eager learners. They have never seen parking meters or escalators. But they read about them. Eskimo children use the same books that children use in other parts of the country.

Anaktuvuk Pass has only an elementary school. High school students must leave the village to go to school. The United States Bureau of Indian Affairs pays their room and board. Eskimos go to schools as far away as Oklahoma.

The only electricity in the village is at the school. Movies are shown there, and library books are bought with the profits. Village meetings and Eskimo dances are held in the school. People sing and dance to the sound of drums.

The children of Anaktuvuk Pass will certainly live differently from their parents. Oil has been discovered about a hundred miles from the pass. A winter road already connects the pass to the larger city of Fairbanks. Now, people talk about building a railroad and an oil pipeline there.

Anaktuvuk Pass is not likely to remain such a lonely, isolated place. Perhaps one day it may be a modern, busy little town in the midst of the frozen mountains.

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Will Success Spoil Honolulu ?

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Will Success Spoil Honolulu ?

Stephen Jackstadt

The nicest thing about Honolulu is its difference. It is different from most other cities in the United States. It has lovely green mountains and deep beautiful valleys. It has gleaming waterfalls and streams and lovely beaches. It has a pleasant, mild climate all year long.

The Hawaiian way of life is different from that of other places. People in Honolulu live in a very simple, relaxed way.

For example, let's meet Lono Maki. He is an old man of Hawaiian descent. All his life has been spent in Honolulu. For the past fifty years, he has lived in Kalama Valley. This is one of the last farming areas left inside Honolulu's city limits. Lono Maki raises pigs in the valley.

Lono gets up early in the morning. He feeds his pigs and then goes fishing. After a few hours he wanders home and cooks his fish for lunch. After all that exercise, he may take a long nap. Later, he may talk with his neighbors until it is time for dinner. His life is quiet and unhurried. It is just the way his father and grandfather lived.

But now things are different. Lono Maki may have to leave his home. His lease on the land has run out. The company that owns the land will not rent to him anymore. It wants to tear down his shack and build a housing development on the land. The company can make more money this way. Mr. Maki must move to the country or to a more crowded part of Honolulu. Others like Mr. Maki must do the same. As Hawaii's economy grows and prospers, it changes rapidly. New things are replacing the old.

Lono Maki says, "I knew this was going to happen sooner or later. More people are coming to Honolulu, and they must live someplace. Houses must be built for them. I guess this land is just too valuable to use as a pig farm. But I do hate to leave my home. Hawaii may be growing, but it is getting harder to live like a Hawaiian."

Many people agreed with Mr. Maki. The streets and highways of Honolulu are jammed with cars. Auto-exhaust fumes pollute Honolulu's air. The new buildings threaten to ruin Honolulu's natural beauty. Open spaces are disappearing. People's view of the mountains and the ocean are being cut off. Trees have been cut down. The charm and beauty of Honolulu are disappearing. Before long, it will look like any city on the mainland.

What can be done to keep Hawaii from losing its charm? How can Honolulu's clean water, air, and natural beauty be saved?

Hawaiians could stop inviting tourists to come to Hawaii. They could outlaw automobiles in order to stop traffic jams and air pollution.

What if the people of Honolulu did stop asking tourists to come to Hawaii? What would happen to the people who work in hotels? What about the taxi drivers, waitresses, and all those who serve tourists? Many of these people would lose their jobs.

Suppose a law were passed against building high-rise buildings? It would create two main problems. There would be few jobs for construction workers. There would be no place for Honolulu's new residents to live.

Suppose automobiles were outlawed. How would people get to work? How would children get to school? How would mothers do their shopping?

You see, it is not easy to find answers to Honolulu's problems. But careful planning can help. For example, high-rise buildings could be allowed if they do not destroy the beauty of Honolulu.

A few years ago, the city of Honolulu allowed some tall buildings to be built on the slope of Punchbowl Crater. This was a crater of a beautiful extinct volcano right near the middle of town. One day people noticed that the crater could no longer be seen. Buildings covered its sides. An important natural landmark was ruined.

Honolulu's leaders learned from that mistake. Later, men wanted to build on the slopes of Diamond Head, another extinct and beautiful volcano. This time the planners said, "No, you will have to build somewhere else."

One group of planners are trying to help Honolulu regain its old charm. Their plan is the Downtown Reconstruction Plan. According to this plan, when old buildings are torn down in downtown Honolulu, they will be replaced by new buildings. But the new ones will reflect Honolulu's many cultures. For example,

one section of town will be set aside for a new Chinatown. All the buildings in this area will be built like those in China. There will be a Chinese Cultural Plaza in this area. This plaza will have a Chinese language school and a Chinese market. There will also be a space for a Japanese Plaza. It will be called the Ginza Plaza. *Ginza* is the Japanese word for a bustling, busy street. On the plaza will be Japanese shops, Japanese businesses, and Japanese restaurants.

There will also be space downtown for a Korean and a Filipino area. In this way, Honolulu will keep its charm and its different ways of life.

Planners do sometimes have ideas that make almost everybody happy. But usually their plans make some people angry or unhappy.

For example, builders were angry when they were not allowed to build on the slopes of Diamond Head.

When Lono Maki had to leave his land to make way for the housing development, he was unhappy.

Planners have also come up with an idea that some people like and some people hate. The plan is to keep Honolulu from becoming so crowded. Under this plan, Hawaii's leaders will encourage new businesses not to locate in Honolulu. Instead they will be encouraged to locate on the outer islands of Maui, Kauai, Molokai, and Hawaii.

Tourists will be encouraged to spend less time in Honolulu and more time in other parts of the state.

Many people like this idea. Some in the outer islands want this "spread-out" plan. It will mean more economic growth for their island. Others do not like the spread-out plan.

Many businessmen in Honolulu, for example, want more, not fewer, people to move to the city. A crowded Honolulu means more business for them, they believe.

So you see, a planner's job in Honolulu is not an easy one. It is hard to satisfy everyone. A planner must consider the feelings of many different people. He must balance the wishes for prosperity against the desire to keep Hawaii's natural beauty. Above all, he must try to do what is best for the majority of the people in Honolulu.

Honolulu has changed. It will change even more. That is certain. But it is not too late for the people of Honolulu to save some of the things that make their city different and exciting.

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Journey to Washington (Part I)

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Journey to Washington
(Part I)

Senator Daniel K. Inouye
with Lawrence Elliott

No one could say how the fire started. One moment all Yokoyama slept. The only sounds were the wind and the whispered rush of the stream that fell from the mountain and ran by the thatched roofs of the village. And then a spurt of flame broke from the house of Wasaburo Inouye. There were shouts in the night. "Fire! Fire!"

Men tumbled from the dark houses and raced for the stream with their buckets. But the easterly wind gathered strength as it blew down the long valley where the village lay. In spite of all the water the men could fling, the flames leaped from the Inouyes' house, to the next house, and then to the one after. Only when the men doused the roof of the third house in line was the fire's deadly rush halted. And by then three homes lay in smoking ruins.

Early in the morning, the elders assembled in the village meetinghouse. It was the code of the hill country of southern Japan that he who lived in the house where a fire began must pay for the rebuilding of any other house that burned and for all the lost possessions. It was Inouye who must pay, the elders decided. They fixed the amount at $400.

Wasaburo Inouye accepted it in silence. When he reached what was left of his home, Wasaburo beckoned his family to sit with him and listen. They must pay the other families $400. It was a matter of honor. And since there was no way to earn such money in the village, Asakichi, the eldest son, must leave the village and earn it.

Wasaburo went on: Tomorrow the son would go to Fukuoka. There he would find the recruiters for the Hawaiian sugar plantations, and he would sign a contract. From his earnings, he was to send back as much money as he could until the debt was paid. Then he might return.

Only the month before, the recruiters had come through Yokoyama. Hawaii, they said, was a land of wealth and promise for anyone who would sign a five-year contract to work in the sugarcane fields. The great companies of the Islands were prepared to pay transportation costs and a wage of ten dollars a month to each worker. Such a sum was unheard of among the farmers and laborers of the hills.

So Asakichi and his wife, Moyo, set forth on their long journey. Moyo carried four-year-old Hyotaro. Asakichi carried everything else they owned in a parcel on his back. It was September 28, 1899.

It took fifteen days to cross the Pacific. Then came the morning when they were herded into lines with hundreds of others and assigned. Asakichi's home became a small splintery shack in Camp Number Two of the McBryde Plantation. It was not far from the town of Wahiawa on the island of Kauai.

Each morning by six thirty, the workers were in the cane fields. Asakichi's muscles hardened. He worked

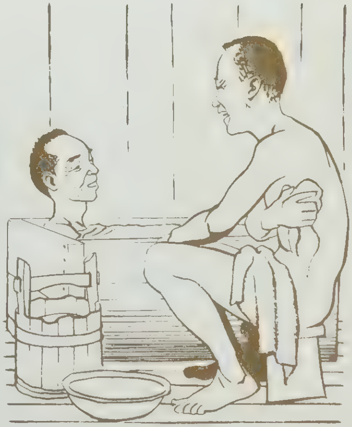
12 hours a day. As spring came and slipped into the long days of summer, he worked 13, 14, and 15 hours. And on the last day of each month, he waited in the pay line and was given whatever was left of his ten dollars after his debt at the company store had been deducted.

Then, he and Moyo would take out a small sum for their needs in the month ahead—a pair of work pants or shoes for the boy. The next day, they would send whatever was left to Yokoyama. But all that was ever left was a dollar or two. Before long Asakichi came to realize that it would take him a lifetime to pay off the family debt.

How could he ever earn enough money? For a while, his mind wrestled with the problem. One night, he got an idea. "I will build a bathhouse. What Japanese would not pay to bathe himself in warm water, as we all did at home? I will find the wood and build a bathhouse, and I will charge a penny a bath."

Asakichi was skilled with his hands and soon he had built a square tub. Each day he hurried home from the fields to heat the water in a stone pit outside the wood shack. Many people came. They were grateful for the chance to clean their bodies after a long hot day chopping cane. It was a small touch of home, and they paid their pennies gladly.

Then Moyo had an idea: She would bake *tofu* cakes to sell! Made from soybeans, tofu was a favorite food in Japan. Now the coins in the Inouye's money jar began to mount. But Asakichi and Moyo had to rise at two o'clock in the morning to build the fires and bake the cakes. By now they were peddling them through the camp before people went to work.



The time soon came to see to Hyotaro's schooling. Asakichi sent him to the priests at the Buddhist temple in Wahiawa. Hyotaro was not quite ten when he finished his education there. He could now write in Japanese and do small sums, which is all the learning his father or grandfather ever had. But there were some in the camp who were sending their sons to the grammar school in Eleele, where they were taught English. Hyotaro asked if he, too, could go there.

Asakichi had just decided to work in the cane fields for another five years. He had come to see that Hawaii might be his home for a long time to come. Not a quarter of the debt had been paid. He saw, too, that in these islands there might be a better life for a Japanese—a life not necessarily bound to the red soil where the cane grew. A Japanese who learned to speak English could become a clerk or even open a small shop. If they were not to return to their homeland, Asakichi wanted this better life for his son. And so he entered the boy in the Eleele school.

Working when there was work and snatching a few weeks of school whenever he could, Hyotaro took eight years to finish grammar school. Then he wanted to continue his education. In September of 1913, Hyotaro left the island of Kauai for the first time. He sailed on the interisland steamer to Hawaii—the Big Island. There he enrolled in a boarding school to prepare for Mills High School in Honolulu. Since there was no money to pay for his schooling, he had to earn his way.

Hyotaro was 25 years old when he graduated from Mills, older by six years than anyone else in his class. He found a job as a file clerk with Theo. H.

Davies, Ltd., wholesalers and shipping agents. He met a small, bright-eyed Japanese girl, whose name was Kame. In September of 1923, Hyotaro and Kame were married. The young couple went to live on Queen Emma Street, a Japanese ghetto. Two-family houses pressed one on the other and the street was full of children screeching a jangle of Japanese and English. There, in the early evening of September 7, 1924, I was born. My parents named me Daniel Ken Inouye.

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REGIONS OF THE UNITED STATES

Journey to Washington (Part II)

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Journey to Washington (Part II)

Senator Daniel K. Inouye
with Lawrence Elliott

There was always enough to eat in our house—although sometimes barely. But, most important, there was a belief that opportunity awaited those who had the heart and the strength to pursue it.

I spoke Japanese well. English was another matter. I limped along in that tongue, picking up a word here and another there, until I entered kindergarten. At that time my mother and father stopped speaking Japanese and began to speak English—and only English—at home. Of course that was a hardship and a sacrifice for them, but they stuck with it. There would remain ties of tradition and sentiment with the old country, but there would never be any confusion about my parents' allegiance; they were American.

This is not to say that either one would shut the door on their Japanese heritage. There were no jangling conflicts between East and West in our house, but a kind of blend of the two.

I remember a great celebration in our house. The debt had been paid after nearly thirty years of persistent and painful effort. Asakichi had redeemed the family obligation. Had he chosen to do so, he could now have returned to Yokoyama.

Asakichi's sons and daughters had made a permanent home in Hawaii. They were Americans. He now had passed more years in this new place than he had in the land of his fathers. And so the decision was made. He would stay in the Islands.

My mother was no ordinary Japanese girl. She had been raised in a Western home and believed in the worth and dignity of every individual. We were poor; but since all our friends and neighbors were equally poor, I never felt sorry for myself.

I loved school and, like my friends, I was busy with many hobbies and occasional yard-boy jobs. I enrolled in a Red Cross first-aid course. I was pretty good at it. When I had my certificate, I began teaching first-aid classes of my own. Otherwise my life was pretty typically teen-age. I played tenor sax and clarinet in the school dance band.

All this was all right with my parents so long as I was faithful to the strict family code of behavior. For one thing, no matter what the occasion and no matter where I was, I had to be back in our living room by ten. There were no exceptions.

So it was that one Saturday night at a dance at school, I had to cut out of the band at nine thirty. I had to run the last few blocks to make it home on time.

We chatted for a while; then my father stretched and said, "Let's go to bed. Tomorrow will be a long day."

He could not know how terribly right he was. It was December 6, 1941.

The family was up by six thirty that morning. As soon as I had finished brushing my teeth and pulled on my trousers, I automatically clicked on the little radio that stood on the shelf above my bed. I remember that I was buttoning my shirt and looking out the window when the hum of the warming set gave way to an excited voice. "This is no test!" the voice on the radio cried out. "Pearl Harbor is being bombed by the Japanese!"

"Papa!" I called, then froze. I stood motionless in that little bedroom. Now my father was standing in the doorway listening. We were caught at that instant in a kind of nightmare shared by all Americans of Japanese descent.

"Come outside!" my father said to me, and I plunged through the door after him. We stood in the warm sunshine on the south side of the house and stared out toward Pearl Harbor. Black puffs of antiaircraft smoke littered the pale sky. The dirty gray smoke of a great fire billowed up over Pearl Harbor. Then we saw the planes.

We went back into the house and the telephone was ringing. It was the secretary of the Red Cross aid station. "How soon can you be here, Dan?" he said.

"I'm on my way," I told him.

It would be five days before I came home. I was a boy when I set out on my bicycle for the aid station that morning of December 7. When I finally did come home, I was a 17-year-old man.

The planes were gone as I pumped furiously toward the aid station, more than a mile away. I carried the bitter burden shared by every one of the Japanese-Americans in Hawaii; not only had our country been attacked, but our loyalty was sure to be questioned.

I reported at the aid station. We worked on into the night, and were working still when the new day broke.

We began to hear disturbing stories of what was happening to the Japanese on the mainland. Along the West Coast, thousands of Japanese families were taken from their homes, often on 12 hours notice, and moved to "relocation" camps surrounded by barbed wire.

Had it not been for a few courageous and outspoken men, the same thing might have happened in Hawaii. Most Hawaiians stood by their Japanese neighbors, and some spoke out for them in no uncertain terms. John A. Burns, a governor of the state, was then a police captain in Honolulu. In the earliest days of the war, he showed his backbone by announcing, "I have complete confidence in Hawaii's Japanese-Americans."

His confidence was not misplaced. Not a single act of sabotage was ever charged to an American of Japanese ancestry from the day the war began until the day it ended. When the army finally permitted Americans of Japanese descent to volunteer for service, more than 10,000 men showed up at their draft boards.

I was one of the 2,686 Hawaiian Japanese volunteers. I was promoted to an officer on the battlefield. It was my responsibility to lead my men against the enemy. And then, in northern Italy in April of 1945, I was wounded in the side and leg. I lost an arm. When the war ended, I was in a hospital bed, learning to get along without my right arm.

They taught me to use a knife and fork with my left hand. They taught me how to write with my left hand. And most important of all, they helped me to believe that there wasn't a thing in the world I couldn't do with my left hand, if I wanted to do it badly enough.

Of course, the thing I had most of in those months in the hospital was time to think. And the thing I thought about most was what was to become of me.

In time I decided that I wanted to become a lawyer. From the first I thought about the law in its purest sense—the law of the land. I wanted to help make the laws. I wanted to become a lawyer so I could go into politics.

In my mind, the past and future came closer together. History was no longer a list of old heroes and exciting events. It was real problems and the concern of real men who wrestled with them. The things that happened in Hawaii in those next years of promise and change would be the history my children would learn in school. It would change their lives.

I was finally discharged from the army in May 1947. The first thing I did was to begin classes at the University of Hawaii. When I graduated in 1950, I decided to study law at George Washington University in Washington, D.C.

I returned to Hawaii with a law degree. But of course my heart was in politics. I had studied law to help me be a better politician. I saw politics—and still see it—as a thoroughly decent and worthwhile profession, a chance for men of goodwill to offer real service.

I served in the Territorial Legislature of Hawaii from 1954 to 1959. When Hawaii became a state in 1959, I was elected to the United States House of Representatives. In 1962, I was elected to the United States Senate.

I was going to the Senate. I, Dan Inouye, who had been raised in poverty and whose father had been born in a tiny Japanese village.

But there was really not a great difference between my story and the story of millions of other Americans who had come to this land from Ireland and Italy and Poland and Greece. They had come because America would permit any man to hope and work toward the topmost limits of his own talent and energy.
I am proud to be one with these people.

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REGIONS OF THE UNITED STATES

The Life and Death of Widen and Growing Up in Swandale (Part I)

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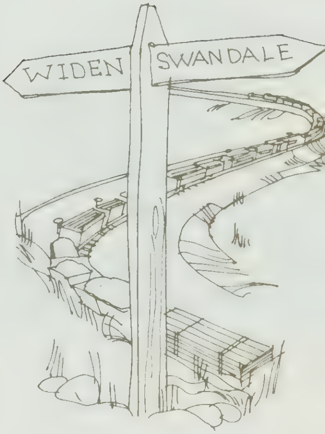
West Virginia is in the center of the Appalachian Region. In the heart of West Virginia lies Clay County. Seventy years ago Clay County was covered with thick and beautiful hardwood forests. Beneath the forests were rich deposits of soft coal.

In 1904, a town called Widen was built in Clay County. Ten miles west of Widen was another town. It was named Swandale. The towns were connected by a railroad. Both towns were in the coal and lumber business.

There was a time when Swandale and Widen were lively places. Here are two stories about the life of these towns.



The Life and Death of Widen

William C. Blizzard

The town of Widen was born in a lonely forest in the heart of West Virginia. The year was 1904. Widen was built by the Elk River Coal and Lumber Company for just one reason. Men wanted to take coal from the West Virginia hills and send it to be sold in the markets of the world. The town provided homes, churches, stores, and schools for the families of the men who mined the coal.

For many years, there was only one way to enter or leave Widen. An 18-mile-long railroad was built and owned by the coal and lumber company. The railroad was connected with a larger railway line that carried Widen's coal out of the hills and to the markets.

The story of Widen is like the story of many towns in the Appalachian Region. Widen was built on the private property of the coal and lumber company. The town belonged to the company. The people who lived in the town did not elect officials to decide how their city would be run. The company decided just about everything.

The company determined where the streets and houses and stores should be. It said who could have credit at the store. The company even had its own private police force.

The welfare of the town and the people in it depended on how well the coal and lumber company did. In 1958, the owner sold the coal and lumber company. Mining and lumbering began to slow down. In 1963, the mine was closed. Widen's only business stopped. The town began to die.

Today, only a few people remain. They keep hoping the new company will open a new mine. But there is no sign that this will happen.

One man who still lives in Widen worked in the Widen mines for almost fifty years. He says, "We stay here because it's cheap to live. I bought this house for very little money. My wife and I have only social security to live on."

This man gets no retirement pay. Without money, where can he move? Yet, he and his wife face serious problems. They are elderly. If either of them became ill in midwinter, they might die before a doctor could reach them. Widen has no doctor. In fact, there is not even a first-aid station or nurse in town. In severe winter weather, only a snowplow can get in and out of town.

The people at Widen keep hoping that maybe the mines at Widen and the mills at Swandale will reopen. Unless the mines do open again, these towns will die completely. But the people there are not very hopeful. Almost all the mill machinery has already been taken away. The few people remaining probably will be forced to move away. Then all that will be left at Widen will be the great smoking piles of mining waste that have built up over half a century.

Growing Up in Swandale (Part I)

Oleta A. Pauley

I remember when we moved to our new house. It was high up on a hillside at the edge of the woods. It looked down over the sawmill where my father worked.

I was six years old, and at first I felt a little bit scared of the strange, dark house on the hill. I also hated to climb the 120 steps from the road up to the house.

But the house soon became like a warm and familiar friend. The long climb up the stairs became a part of daily life, just as waking up, and washing, and eating breakfast. My family lived in this house until we left Swandale.

My father was a mill foreman at the sawmill in Swandale. He and my mother had moved to Swandale about 1918. He came to work as a carpenter and bricklayer for the Elk River Coal and Lumber Company. The company built and owned both Swandale and the town of Widen, ten miles to the east.

I was born a year after my parents moved to Swandale. After me came a sister, Jean, and then two brothers, Ovid and Leonard. All four of us were born within six years. We were a happy family.

My mother was a talented dressmaker and did beautiful needlework. She made all our clothes, and she earned money by sewing for other ladies in town. She kept a spotless house and was a good cook, too.

Forty years ago, the streets of Swandale were lined by rows of red houses with white trim. Each house had its own yard and some had a garden. There were about 150 houses in town. The superintendent of the Elk River Coal and Lumber Company lived in the biggest one.

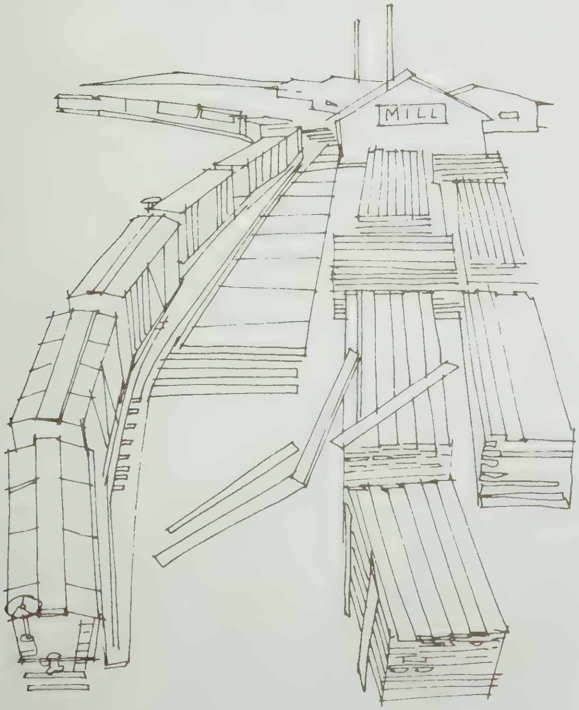
The company had built all the houses, and we rented them. There was also a big company store. In it were the company office, the post office, and a doctor's office. The store sold just about everything from barrel salt and horseshoe nails to furniture.

The company had also built a Community Building. It held four schoolrooms, a church and Sunday school, and rooms for town parties and socials.

The sidewalks were made of wood. Wood was cheap in the forest country of West Virginia. The wood sidewalks and steps led up and down the hilly streets of Swandale.

One special part of the town was the high lumber stacks that began at the sawmill and stretched all the way to the edge of town. Railroad boxcars stood nearby for loading. The boxcars carried our Clay County lumber to New York, and Philadelphia, and many other places.

We never were without things to do. Swandale and Widen had "talking movies" before some other larger towns. We had both a men's and a women's basketball team. There were youth gatherings, pie socials, box suppers, and parties. We had a fine little town.



Social Science Satellite Kit

REGIONS OF THE UNITED STATES

Growing Up in Swandale (Part II)

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Growing Up in Swandale (Part II)

Oleta A. Pauley

Christmas was a special time. It meant weeks of preparation. We practiced songs, and plays, and skits for programs that we gave in the Community Building. Everyone came. There were grandparents and babies, townspeople, and folks from the hills around. After the program, we were given a treat—a big apple, a big orange, and sacks of candy for each member of the family.

Family fun took place at home. At our house we had many instruments for playing music. My father and mother loved to play and sing, and they taught us. After the evening meal we usually sat out on the porch in the swing and sang or picked the guitar and banjo.

Our family walked together in the woods. We learned about the different trees and wild flowers in West Virginia. We learned to look for the things of nature: a pretty stone, a strangely bent twig, soft green moss, smooth and furrowed tree bark. We found ways to use these things to help decorate our home.

But it was not all music and walks in the woods. We had our work to do. The girls did needlework and made clothing. The boys cut wood, carried in coal, and cared for animals.

In summer, we all went swimming. There were two big swimming holes for both young and old. Everyone was there on summer Sundays. And they could be used for more than swimming. Many a time I've seen a baptizing in one or the other.

Sleighing and ice skating were the winter sports. There was always a big fire while we rode or skated. Each of us took potatoes in our pockets and put them in the ashes to roast while we played. When we got cold enough, we would sit around the fire and eat the steaming potatoes. I can't remember anyone ever forgetting to bring salt or pepper!

In the early days, fishing was good in Buffalo Creek. But then the town of Widen put in a coal washer. The water of the creek that flowed down to Swandale turned black. The stream became polluted. Fish could not live in it. Children could not play in it.

Boys and girls enjoyed hunting small game in the fall. Mother was a crack shot. Dad taught us gun safety early.

We had one of the first radios in town. My father had taken a course in the mail to become an electrician. He made his own set. It had nine tubes and an enormous speaker.

The cabinet was made from beautiful bird's-eye maple with a bench to sit on while tuning in the set. It was beautifully finished. My father worked on it for hours and hours, smoothing and rubbing the glowing wood. People from all around came to listen.

I went to grade school in Swandale. I liked my school, even though it was nothing like the schools of today. There were no modern buildings, no handsome new books, no hot lunches, and very little sports equipment. Recess was the most fun. We played "long town" with a flat board and a rubber ball. In winter, we went sliding on a piece of tin down a hillside. We also had snowball fights.

When it came time to go to high school, we took the "diploma test." If our grades were good enough, we went to Clay County High School. I was one who got to go. Along with twenty other students, I boarded a train at the Swandale store at seven o'clock every morning. This took us to Dundon, ten miles away. There, rain or shine, hot weather or cold, we walked on to Clay County High School.

Sometimes the townspeople and storekeepers invited us in to warm up awhile before going on. Sometimes the train would hit a cow on the tracks or a rail would break. Then we would all be late for school.

Sometimes Buffalo Creek overflowed and covered the railroad. Then, after school, we had to walk all the way home. We would arrive wet and muddy from head to foot. We loved it.

When I was 18, I went to work for the Elk River Coal and Lumber Company for a dollar a day in the company store. I worked in the various company stores and offices for 13 years.

I guess we were poor. I guess most of the folks in Swandale were poor. The average sawmill worker's pay was low. But we were better off than many. After all, my father was a mill foreman for many years.

Even as a foreman, he probably never earned more than $350 a month. Most months, almost all the wages had been spent by payday. We got along by always borrowing against future wages. This meant we were always in debt. As long as we were in debt, we couldn't very well move. The company made sure that its workers would stay on and on.

A hospital plan took care of all ailments. If someone needed to go to the hospital, the bill was paid in advance. But this, too, was deducted from wages.

We did not get a pension. There was no insurance for sickness, old age, or care of families. Many Swandale workers found this out too late. My father was at retirement age before he learned that he had nothing to show for the forty-five years he had given to the Elk River Coal and Lumber Company.

I married just before World War II. When my husband was away in the service, I worked for the company. When he returned, he went to work in the Swandale sawmill.

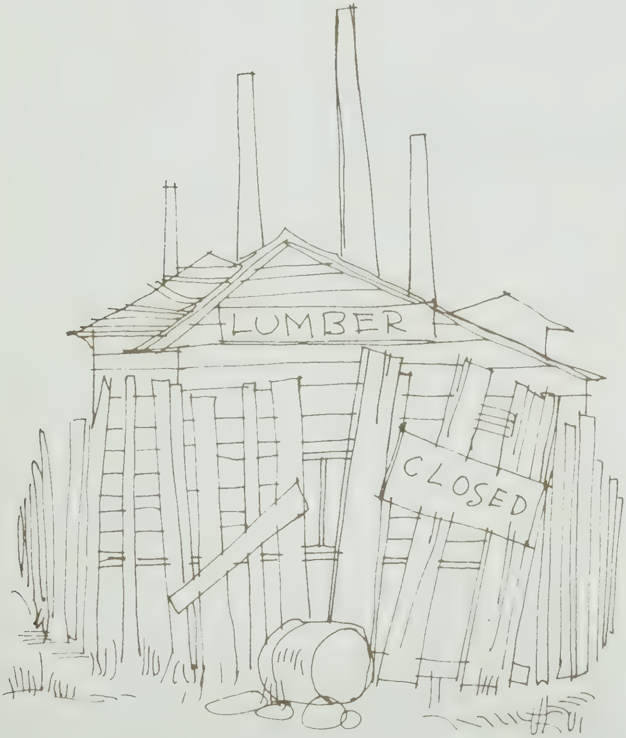
We lived in Swandale for seven years. Then the company transferred my husband from Swandale to Widen. But soon everything began to go: the mill in Swandale closed down, as did the mines at Widen.

I don't get back to Swandale often anymore. Most of the people are gone. When the mill closed, there were no more jobs.

As I drive along the narrow road between the creek and the railroad track, I have mixed feelings. I am sad as I remember the happy days of my childhood. I am sad as I remember the neat red houses with white trim. I am angry when I think of what has happened to my home. I am angry when I see that my hometown has become a ghost town.

The hillsides are bare, except for sparse patches of weeds. The houses are boarded up. Windows are broken. Splintered trees lie across Buffalo Creek. The water of the creek, once so clear and clean, flows slow and muddy.

When I go back to Swandale, I remember a town full of warmth and cheer and life. But I see a town that is dead.



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REGIONS OF THE UNITED STATES

The Mountain, the Miner, and the Lord and Mother Jones

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The Mountain, the Miner, and the Lord

Harry Caudill

In the old days, the miners of eastern Kentucky did not always use timber posts to hold up the roofs of their mines. Instead they often used pillars of coal. These supported the roof. Sometimes the pillars would become too thin and weak. They could not hold up the roof. The mountain above would give way with a great crash. Then the mine would collapse. Many miners lost their lives when this happened.

This is a story about these weak pillars of coal. It is also about a brave black miner named Sam Hawkins.

Sam had spent much of his life in the mines. He was the best coal loader in the Elkhorn mines. But times were hard. Even the best miners were lucky to get two full days of work a week.

Sam had never been to school. He had to start working when he was just a child. And anyway, there weren't any schools for blacks where he lived.

Sam could not write his name. But he had a great dream. He was willing to work hard to send his only daughter—Margaret—to college.

Margaret wanted to be a schoolteacher. After years of work, Sam was able to send Margaret to the Kentucky State College for Negroes at Frankfort. He sent

Margaret every spare penny to help her stay in school. But he could not seem to earn enough.

One cold February day, Sam got a letter.

> Dear Papa,
>
> I must have $10. If I can't get it, I'll have to drop out of school and come back home. Can you help me any more?
>
> Your daughter,
> Margaret

Sam had no money at all. He knew no one to turn to. So he did the only thing he could think of. He knelt and prayed.

"Lord," he said, "I know I don't count for nothing, and I don't ask nothing for myself. But, Lord, please help me keep my daughter in school."

At that moment, there was a knock at the door. It was a white foreman from the mines. He said that a big pillar of coal holding up the roof of one of the mines was weakening. It was beginning to crumble. The company wanted to get as much coal as possible out of the mine before everything caved in. The other miners were refusing to work in that part of the mine.

The foreman asked Sam if he would work the night shift and load the coal. Silently Sam thanked the Lord for finding him work.

"Let's get started," Sam said.

Sam shoveled. Every time he took a shovelful of coal, the pillar cracked a little more. He shoveled all night long. By morning, he had loaded more than 30 tons of coal into the cars.

The pillar was cracking and crumbling. The mountain made low rumbling noises. But there was still a lot of loose coal.

Soon the foreman came. He was pleased when he saw all the coal that Sam had loaded.

The foreman called to Sam, "I know it's risky, Sam, but we want more coal. Will you work another shift? If you do, I'll double your pay."

Sam was tired. He was aching all over. He was afraid of the groaning mountain. But he felt it was the Lord giving him the work. Now he would be able to help Margaret.

Sam went back to work. He stayed at it all day. He stopped only to eat a sandwich and drink some water. He shoveled until his arms and legs and shoulders throbbed with pain. The mountain groaned and rumbled and shook.

Finally, the shift was over. Sam walked out of the mine and sat down to rest. He had loaded more than 60 tons of coal in twenty hours. He sighed and closed his eyes.

Suddenly, there was a terrible roar. A whole mountain collapsed into the mine where Sam had been. Sam smiled. He knew that the hand of the Lord had held the mountain up all day so that he could earn money for his child.

Sam went to the company office to collect his pay. The boss was pleased with all the coal that Sam had saved. The boss told Sam he had earned $14.73 for the 20 hours of work. The boss wanted to pay Sam in company *scrip*. Scrip was not real money. It was company money. Miners could spend it only in the company store.

Sam told the boss he needed his pay in cash. He said he needed to send the money to his daughter.

The boss said, "I can pay you only $11 if you want cash."

Sam was thankful. He said he would take the $11.

Sam collected a ten-dollar bill and a one-dollar bill. He walked straight to the post office. He mailed the ten-dollar bill to Margaret, and he went home with one dollar in his pocket.

Soon, Margaret got a job. She earned enough to pay the rest of her college expenses. She got her degree and went back home to teach.

Years later, Sam remembered his 20 hours of shoveling. He said, "Don't tell me the good Lord won't help people. He sure helped me that time."

Mother Jones

William C. Blizzard

Many years ago, miners of the Appalachian Region led hard lives. They worked long hours. They got low pay. The coal mines were dangerous. There were many accidents. Many men were killed.

When the miners suffered, their families suffered. Their homes were dirty, and their food was bad. If the men of the family were injured or killed, the family got no money at all. So some of the miners decided to form a union.

But miners who tried to form a union were fired. The mineowners said that they were the ones to decide how much wages to pay. They said they owned the mines. The workers had no right to tell them what to do.

There were riots and fights. Men were beaten. Men were shot. The miners fought hard for what they wanted. The owners of the mines fought back just as hard.

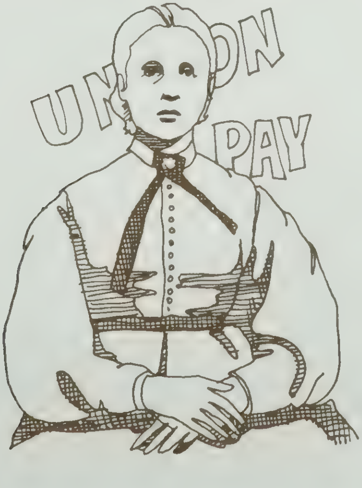
One of the best and bravest friends the miners ever had was Mary Harris Jones. Miners called her Mother Jones. She was a white-haired lady of sixty-five when she joined the miners' cause in 1891.

Miners were fighting for a union, and Mother Jones led many strikes against the mineowners.

Mother Jones was very brave. Mineowners and police often aimed guns at the strikers. But she would walk up and dare them to shoot. She was attacked; she was thrown in jail. But she never stopped.

Mother Jones knew the problems of the Appalachian miners, and she was determined to fight for changes. For more than 20 years, she walked and rode up and down the mountains encouraging the miners. She also helped their families. At the age of 92, she was still involved in the cause.

Because of people like Mother Jones, the miners finally got their union. Mother Jones died in 1930; she was 100 years old by then. But the United Mine Workers are not likely to forget her or her work.



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New England: Cradle of American Education and Horace Mann

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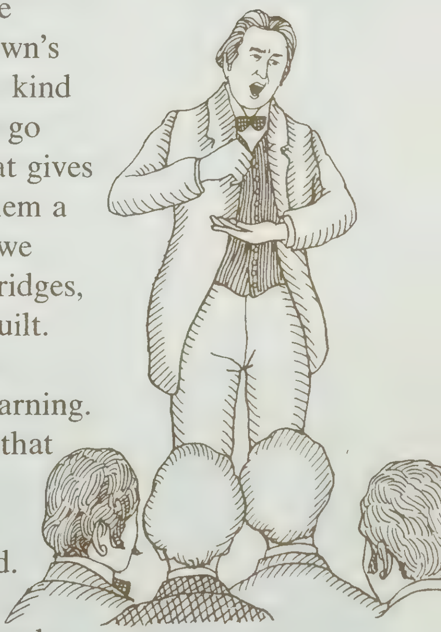
Patrick Thompson incident described in "New England: Cradle of American Education" adapted from *Memories of Arlington* by Dorothy Canfield Fisher. © 1957 by Duell, Sloan & Pearce, Inc. By permission of Meredith Corporation.

New England: Cradle of American Education

Joseph McCarthy

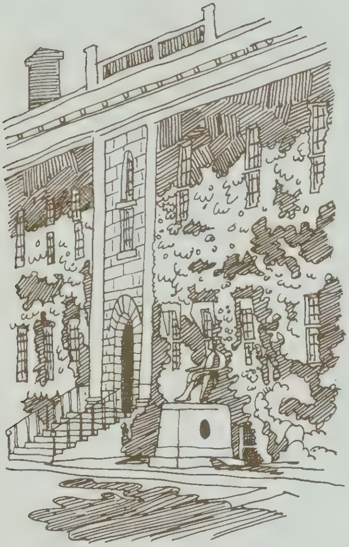
Years ago there was a town meeting in New England. The village of Arlington, Vermont, had a problem. It had to decide how to spend tax money.

Some people wanted to build a school. But others wanted money spent to repair bridges. They gave speeches about the poor bridges. Finally the town's storekeeper, Patrick Thompson, shouted, "What kind of town do you want? A place where nitwit folks go back and forth over good bridges? Or a town that gives its children good education? A town that gives them a chance to hold their own in modern life? I say if we have to choose between a new school and good bridges, *let the bridges fall down!*" The new school was built.



New England people like Patrick Thompson believed in the value of education. They prized learning. Settlers in New England came to the New World so that they could have freedom to think and worship as they pleased.

Most of the Puritan settlers were well educated. Many had studied at Cambridge and Oxford in England. Their religion encouraged every man and woman to study hard. Learning was important. So New England became the center of new ideas.



New England was the birthplace of American education. Only sixteen years after the Puritans came to Massachusetts, they started Harvard College. Located in Cambridge, near Boston, Harvard was the first college in the United States.

The first printing press in the American colonies was also set up in Cambridge. In 1669, a Bible was printed for the Indians.

A few years later, a Massachusetts law required that every town with at least fifty families must have an elementary school. By 1800, there were colleges in every New England state.

From New England, too, came Noah Webster's *Elementary Spelling Book*. This book taught American youngsters all over the country how to read. Webster was from Connecticut. He put together the first American dictionary. It still bears his name.

In the early days of our country, girls did not go to college. Girls were only trained to keep house and rear babies.

But some women wanted to be educated. In 1837, America's first college for girls was started. Located in the hills of Massachusetts, it was called Mount Holyoke. Its founder was Mary Lyons.

Mary Lyons's parents died when she was very young. She was left all alone with only $37 to her name.

Mary Lyons wanted to be a teacher. She studied hard. Finally, she got permission to take a few courses at men's colleges. By the time she was 20, she had a better education than most people her age. She got a job as a teacher in a private school for girls.

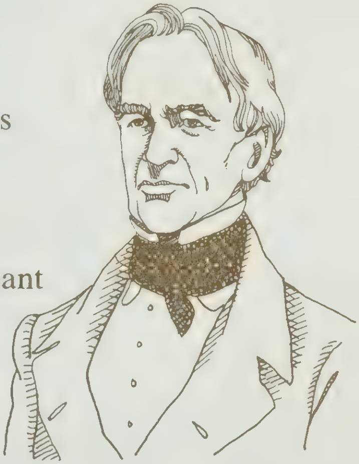
Mary Lyons dreamed about a college for girls. But it costs a lot of money to start a college. So Mary

Lyons gave up her teaching job and spent four years trying to raise money. Finally, she had enough to build a four-story brick building at Mount Holyoke.

The idea of a girls college was successful, and others like it were started in all parts of the country. But the idea first took shape in New England.

Horace Mann

Mary Pat Pierce



A Yankee named Horace Mann is often called the father of public schools in the United States. Horace Mann was born in 1796, just about 20 years after the American Revolution.

In those days, not everyone could get a good education. Well-to-do parents sent their children to private schools. These had good teachers and pleasant classrooms. Children who did not have wealthy parents went to town schools. These schools were not very good.

Horace Mann grew up in the little town of Franklin, Massachusetts. The town was poor. What little taxes the town could collect had to go a long way. So there was little money left over for schools.

Horace Mann went to a town school. His school was so poor it could stay open for only ten weeks a year. The town could not pay a teacher's salary for longer than that.

School was held wherever space could be found. One year, Mann and the children of Franklin went to school in a dark, cold attic. Children of all ages studied and recited together.

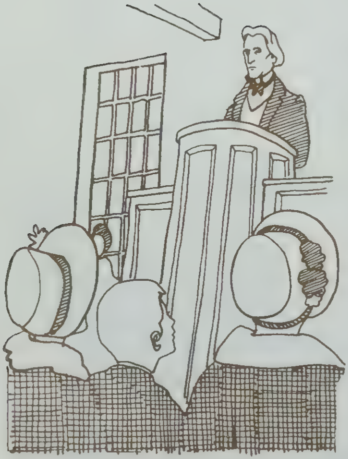
The schoolmaster just sat in front of the class and glared at the students. The children were expected to memorize their lessons. From time to time, the schoolmaster would ask a question. Children who gave wrong answers would be punished.

Horace and his brothers and sisters lived on a farm. Their work began at dawn and they did not stop until sundown.

The Mann family spent Sunday in the strict Puritan way. They banked their fires on Saturday night, and no cooking was done on the Sabbath.

Sundays, they went to church. Mann's parents had a strong sense of duty. They believed in duty to God, to their family, and to others. Young Horace decided to work hard for others.

Horace Mann believed that education would make people better. He said that if young people grew up without education, the new nation would be in danger. He said that in a democracy people should know enough to govern themselves.



Mann and his friends worked for laws to make the public schools better. When the Massachusetts legislature created a state board of education, Horace Mann was asked to be the head of this board. For the next twelve years, Horace Mann traveled all over the state. He urged people to pay taxes to support good schools. But he found few people interested in educating children.

"Why bother?" they asked.

Factory owners said people didn't need to know how to read to run a machine. Mann argued that workers would be more valuable if they were educated.

Wealthy people wondered why they should pay taxes to give poor people an education. Mann tried to shame them. He told them that not paying taxes for school was like stealing from children.

Mann told working men they should demand good schools for their children.

Above all, he said, good schools would help the country. Educated voters were more likely to elect better men to office. If our early settlers hadn't had good schools, he said, we might never have become an independent country. They had to learn about freedom before they could fight for it.

In England, children usually grew up to work at the same kind of job as their parents. They started training for it very early, and they rarely changed jobs.

In America, the schools offered different kinds of knowledge. Young people could decide what kind of work they wanted. They were not tied to one kind of job for life.

The public schools of the United States have helped our citizens take an active part in government. We owe Horace Mann our thanks.

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The First Whale

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The First Whale

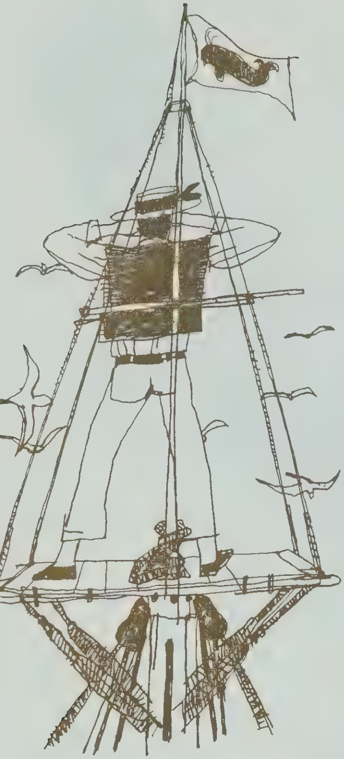
Reginald B. Hegarty

The following is part of a story about a boy's first trip on a whaler. The ship is called the Knowles. *And the boy's father is the Captain.*

Thar she blows! The man high in the crow's nest pointed. Thar she blows! Sure enough, the whale's spout shot high above the sea surface.

On deck the men hurried to lower the boats. After getting my feet stepped on a couple of times—I was barefooted—I decided this was no place for me. I ran for the masthead to watch the boats chase the whale. Father always went there. When we were about a half mile from the whale father called, "Haul aback, hoist and swing three boats." Then as the *Knowles* lost way [slowed down] he gave the order the men were waiting for, "Lower away!"

As the boats were lowered, I noticed how the men were divided up. Of the six men to each boat, the mate and the boatsteerer [harpooner], went down with the boat as it was lowered. The other four men of each boat's crew handled the boat lines. As soon as the boat was in the water, the lines were unhooked and the four men scrambled down the side of the ship and took their places. The boats shoved off. Up went the



masts, then the sails, and soon the three boats were scooting across the water toward the whale.

From way up here, everything was in plain sight. We could see the whale's head as it came partly out of the water when he spouted. We saw his hump as he went under again. The boats looked no bigger than those I used to sail in the washtub at home. Soon one boat began to draw ahead of the other two.

"Reg, watch that first boat, it's Mr. Thomas." [The first mate.]

As the boat neared the whale, the sails came down. The boatsteerer stood up in the bow. When the boat seemed to run against the whale we saw the man dart both irons [harpoons] into the whale. Almost in a blink of the eye, the giant flukes [tail] went up in the air. It swung around just missing the boat. The whale slapped the water with his flukes. The noise was so loud we could hear it way up where we were. Then the whale headed toward the horizon. The boat went faster and faster. Suddenly the whale turned on the boat. We could see the men backing away from the on-charging monster. He missed the boat, then sounded [went down]. Almost before we knew it, he surfaced. Again he headed for the boat. This time he rolled on his back and we could see his great jaw open. He was about to crush the boat with his teeth. Mr. Thomas was standing in the bow holding a bomb gun to his shoulder. When it seemed the boat would be crushed, we saw a puff of smoke. Then the sound of the gun reached us. The whale thrashed the water with his flukes until it was a mass of white foam. Then he headed into the wind.

In no time at all, the whale and boat were almost out of sight. Every once in a while, we could see the whale breech. That is, he threw his huge body clear of the water. It seemed like hours to me when we finally saw the steady flashing of oars as the sun hit the boat. Father started down and said, “They’ve got the whale fin out [dead] and are starting to tow him to the ship.” Before I could follow my father to the deck, I had to untie myself. During the battle with the whale, I had become so excited and jumped around so much that father tied me to the mast. He was afraid I would fall overboard.

The other two boats reached the mate’s boat, and all three began towing the whale. It was slow work. When the boats were a quarter mile away, they left the whale and came right to the ship. It seemed funny to me that they would leave the whale floating there. Then I saw Mr. Thomas pass the end of his line aboard. As soon as the boats were taken up, the whole crew started hauling the whale toward the ship. When he was alongside, the men began getting ready to bring the whale in.

Ever since I had been aboard, it seemed as though no matter what work was being done there was always something for me to do. I had the idea that now there wouldn’t be any work for me. I got fooled. When a whale comes alongside, it attracts sharks. They try to get a free meal. Oftentimes, they take a bite the size of a washtub out of the whale. Father gave me a small lance and told me to get into one of the boats and kill sharks. The place where I had to stand was about fifteen feet above the water. This meant the lance had to be darted quite a distance to reach the sharks. At first, I didn't have very good luck. The sharks seemed to be able to dodge the lance. With practice, I was able to hit one now and then. When I cut one, the rest would turn on the wounded shark. In no time at all, he would disappear.

One day a shark that I lanced almost pulled me overboard. It was after I had a lot of practice and was able to hit where I aimed. My favorite spot was to drive the lance into the backbone so the lance would not pull out so easily. The sharks would run, taking the line with them until it fetched up. I liked to imagine there was a fighting whale on the end of the line.

I must have been a little careless, for suddenly I was being pulled upside down toward the edge of the boat. The line had caught my leg, and as the shark took the line, I went with it. I wrapped myself around the boat side as I was going overboard. Then it was a question of what would give way first: me, the line, or the shark.

It looked as though I was a goner. Then suddenly the line slackened, and I tumbled into the bottom of the boat. When I was finally able to get up, I found out how I had been saved. One of the men had seen that something was wrong. Without stopping to ask questions, he reached out with a long cutting spade and cut the line. I can tell you I didn't try to lance any more sharks that day, or for some time afterwards.

When they were trying out [boiling] the blubber I found something different to eat. I took a piece of whale meat that came from under the hump of the whale, tied a string to it, and cooked it in a pot of boiling oil.

It was good. I also tried eating scraps. These were the pieces of blubber that remained after the oil was dried out. They tasted just like pork scraps, a real favorite with me.

Social Science Satellite Kit

REGIONS OF THE UNITED STATES

The Town That Would Not Die and Route 128

SRA

SCIENCE RESEARCH ASSOCIATES, INC.
Chicago, Palo Alto, Toronto,
Henley-on-Thames, Sydney, Paris
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The Town That Would Not Die

Harold Norton

On the Merrimack River in Massachusetts is a city called Lawrence. The river's falls provided waterpower to turn mill wheels. Mill wheels produced energy for the town's many textile factories. Lawrence was known for the cloth it made. The town was full of skilled workers.

Then, after World War II, things changed. The textile industry began to leave Lawrence and New England. The industry moved South.

Owners found that they could run their factories more cheaply in the South. Labor was cheaper there. The raw material was there. Electricity was cheaper.

In 1945, Lawrence had 31,000 skilled textile workers. By 1949, nearly all were out of work. The giant textile mills stood silent and empty. Whole city blocks of factory buildings stood vacant.

Many people left Lawrence to look for work. For about ten years, it looked as though the city was becoming a ghost town.

Lawrence was mostly a textile city. When the textile mills closed, there was hardly any other business left. Some people said that Lawrence was the saddest town in New England.

Then something happened. In the 1950s, some businessmen in Lawrence got together. They asked

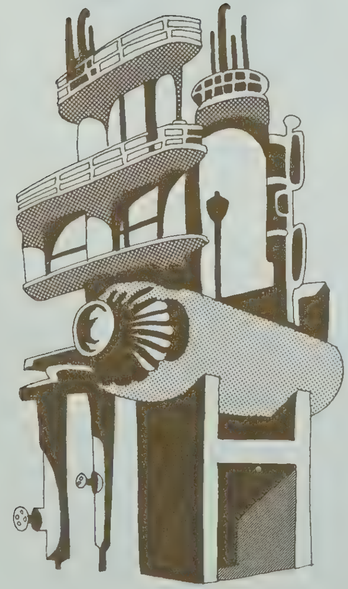
themselves why they should let their town die. They said they would bring Lawrence back to health.

First, they elected a bright young mayor. He helped form a Citizens Committee for Industrial Development. The mayor and the people of Lawrence decided to change the kinds of industry in their city.

Several businessmen pooled their savings. They bought some of the empty old mills. Then they rented this space to other businessmen to start new businesses.

The Citizens Committee advertised in the papers. New businesses moved to Lawrence. Lawrence had two good things. It had plenty of empty space. It also had lots of skilled workers.

The Chamber of Commerce spread the word about Lawrence throughout New England. In the first year, 63 new industries moved to Lawrence. Many of them moved into the empty textile mills.



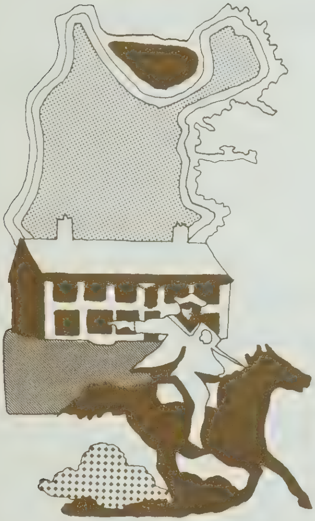
For example, an old cotton mill used to employ 400 people. But the Western Electric Company moved into the mill. Now more than 2,000 people are employed there.

All kinds of new industries came to Lawrence. They produce women's gloves, paper boxes, and men's shoes. Other factories produce sporting equipment and plumbing supplies.

Lawrence is more prosperous than it used to be. It is not a single-industry city. Today, Lawrence has many different industries. If one does not do well, it will not make the whole town suffer.

Today in Lawrence there are very few unemployed people. Wages are good. Working conditions are pleasant. The town is growing. New parks and industrial sections have been built. New buildings and offices have gone up.

The people of Lawrence have shown what citizens can do when they work together. They saved their town. They refused to let Lawrence die.



Route 128

Joseph McCarthy

One night in 1775, Paul Revere rode his horse out of Boston. Down the roads of Massachusetts he raced. As he rode through the villages near Boston, he cried: "The British are coming! The British are coming!" He warned the Americans to arm themselves. The British soldiers were attacking. The American War of Independence had begun.

Two hundred years after that famous ride, Paul Revere would not recognize the land he rode across. Part of the road he traveled has become an important road.

The road makes a half circle around the city of Boston. It is called Route 128. It is also known as the "golden semicircle." It is easy to see why.

Along this road are some of the most important business firms in the world. In all, there are about 650 companies along Route 128. They employ about 66,000 people. New plants are going up along the road all the time, and Route 128 is now a six-lane highway.

Near Route 128 are two of the most famous universities in the world. One is Harvard. The other is the Massachusetts Institute of Technology, or MIT.

Many companies settled along Route 128 to be near Harvard and MIT. Professors at these universities come from all over the world. They study and do research there. They also advise companies along Route 128 about their products. Sometimes they invent new products that the companies then produce.

The professors advise electronics companies. They help them develop better television and telephone parts. They develop better computers and electronic devices for use on earth and in space.

But the industries along Route 128—like businesses everywhere—do not grow constantly. They do not prosper at the same rate all the time. There are times when business is good. But there are also times when business is bad.

The federal government may decide to spend less money on research. If funds are cut, then there is less demand for electronic products.

If universities find that some of their government money has been cut off, they may have to close down some research laboratories.

When this happens, business along Route 128 is bad. Sometimes some of the companies have to cut down on their number of employees. Then workers lose jobs and income. This happened in 1970 and 1971. Many people lost their jobs.

Most people think that the business picture will improve, and the companies along Route 128 will again be prosperous. The people of New England are eager to see more of the same teamwork that helped build Route 128.

The Social Science Satellite Kit

This kit includes thirty-six booklets for social science and reading enrichment. Nearly all of the booklets contain at least three reading selections. Many have more. All of the selections are about real people and actual events in the history of our country.

Primary source materials have been used almost exclusively. The people from America's past speak for themselves from the pages of their diaries, letters, eyewitness accounts, public speeches, and reports. All of the booklets focus upon the *human* side of history in order to show how people were governed, how they made their living, what they believed in, and how they behaved in everyday life.

Two important editorial aids deserve mention. *Headnotes* are provided for the readings in order to supply background material about an author or an event. *Critical thinking questions* accompany each set of readings within a booklet. (The answers follow the table of contents for this kit.)

The kit is designed for all types of reading—individual, tutorial, classroom, structured and unstructured. The variety and appeal of the topics will provide hours of enjoyment for students of varying reading abilities. Inside is a list of the booklets by title in numbered order.

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CONTENTS

1 The Land and the People
2 Virginia
3 New England
4 Pennsylvania
5 Ideas That Shaped the Social System, 1690–1776
6 The Struggle to Build a Nation, 1776–1783
7 How People Were Governed in the Early Republic Volume I
8 How People Were Governed in the Early Republic Volume II
9 How People Made Their Living in the Early Republic Volume I
10 How People Made Their Living in the Early Republic Volume II
11 How People Lived in the Early Republic Volume I
12 How People Lived in the Early Republic Volume II
13 How People Behaved in the Early Republic Volume I
14 How People Behaved in the Early Republic Volume II
15 Alexander Hamilton and the Good Society
16 The Dorr Rebellion
17 Hinton Rowan Helper and the Book That Caused a Storm
18 Secession Tests the Social System
19 The Chicago World's Fair of 1893
20 The Dillingham Commission
21 Alice Paul and Her Ladies
22 The Palmer Raids
23 The Great Depression and F.D.R.
24 La Guardia Fights the Machine
25 Martin Luther King and the Bus Boycott
26 The Steel Crisis of 1962
27 Blacks Challenge the Social System
28 How People Are Governed Now Volume I
29 How People Are Governed Now Volume II
30 How People Make Their Living Now Volume I
31 How People Make Their Living Now Volume II
32 How People Live Now Volume I
33 How People Live Now Volume II
34 How People Behave Now Volume I
35 How People Behave Now Volume II
36 The Social System in the Year 2000

ANSWERS

Booklet 1

1. Explorers traded many worthless objects, or trinkets, for gold, spices, and so on. Indians were also captured and enslaved.

2. The king of Spain ordered that Indians be made to live in towns where they could be organized and a government established; the king believed this would prevent robberies and killings.

3. Men calling themselves Christians had lied, robbed, and stolen from the Indians; thus, Indians believed all Christians were evil.

4. Instructions included details on choosing a site and building homes, streets, and marketplace with emphasis on safety and protection of the settlement.

Booklet 2

1. Responses should include difficulties of raising food, maintaining order, attacks from Indians, and poor health.

2. People became desperate because of such things as low prices for crops, lack of organization, or conditions which caused starvation.

3. Because of many hardships and lack of experience, settlers needed leaders to guide, direct, and help organize community life.

4. Slaves were used in the New World as a labor force and were forced to endure inhuman conditions – they were treated worse than animals.

Booklet 3

1. He accused Puritans of spreading excessive gossip and creating a bad reputation for anyone who did not agree with their beliefs.

2. They created their own charters for colonial governments and established their rights and duties. They also created terms of peace with Indians and established regulated schools.

3. Various diseases and illnesses could affect many people at one time; there were many hardships and no comforts; people had to help and share in order to survive.

4. The Christian or Protestant religion is often mentioned; Massachusetts's charter calls for defending and preaching the "true religion"; Harvard regulations required Bible study and reading and learning about the teachings of Christ.

Booklet 4

1. Employers in America bargained for "indentured servants" who provided labor to clear land, work in fields, and care for livestock.

2. Many believed God had determined that there should be slaves and masters; others thought slavery was against the beliefs of true Christians.

3. Quakers believed in loving one another, in the "golden rule," and in liberty for all; if they practiced slavery they would not live as they believed (slavery was in conflict with their beliefs).

4. Responses should include contrasts in climate, conditions of working people, employment, and wages.

Booklet 5

1. Responses should include benefits of education such as better understanding of religion, government, individual rights, other cultures, agricultural techniques, manufacturing skills.

2. Improvement comes with more equality, individual development, rule by reason, development of the arts and sciences, and planning for the future.

3. Locke believed that governments are needed to control violence in men, promote reason, prevent disorder, provide for justice.

4. Locke said that people must give up a little of their freedom to the government so that the government can protect the greater part of their freedom.

Booklet 6

1. Responses should include Paine's belief that America would continue to grow, that markets would be available for crops, that America did not need to be "mothered," and that British government was too far away and did not understand America's needs.

2. The king made laws that suited him, not the colonists in America.

3. Responses should include the projections of Charles Ingles, who predicted loss of property,' division among colonists, and rule by violence.

4. Ingles predicted agricultural and industrial prosperity and protection for trade, which would provide economic benefits; also, savings in costs of manufactured goods.

Booklet 7

1. A lawyer, merchant, farmer, general, and judge were among the delegates.

2. Responses should allow for student opinions with emphasis on the idea that most delegates wanted to serve their country.

3. The people of North Carolina were concerned that the state would lose its power.

4. He did not like the idea of the federal government having the power to tax people and create an army.

Booklet 8

1. She was attempting to answer Jefferson's complaint that her husband, when president, had deliberately appointed enemies of Jefferson to positions in government.

2. Federalists believed a small group of wealthy merchants and farmers should govern because they would be less likely to revolt since they would have more to lose in a revolution.

3. Anti-Federalists believed in a government of the people with the majority ruling.

4. Part of the decision determined the right of the Supreme Court to overrule or change decisions of the state courts.

Booklet 9

1. Rivers were used for transportation of many goods and raw materials and for personal travel.

2. They used the river to bring in raw materials and other goods they needed. By river they also shipped cotton and other products directly to markets.

3. Steamship operators, merchants, farmers, and others who needed goods transported by water.

4. Responses should bring out that only Congress has the right to regulate interstate commerce.

Booklet 10

1. It was against the law then for people to band together to try to raise their wages. Today this is no longer a criminal offense.

2. The peddler brought all kinds of goods for sale —items people would be unable to buy anywhere else, since there were no stores nearby.

3. Settlers hunted for wild animals and fowl, and also honey from bees; other foods, such as corn, were grown on the land.

4. A legal contract forces people to keep promises they have made to each other.

Booklet 11

1. People gathered primarily to talk and gossip; businessmen often discussed politics. Printing was one important industry; many people were employed in businesses concerned with shipping and trading.

2. Responses should include descriptions of differences in diet, living quarters, and manners.

3. Many people still retained the customs of the European country where they were born; many European goods were sold in stores.

4. Responses should allow for students' opinions with emphasis on Indians' respect for one another and the "natural" way of life.

Booklet 12

1. Most books were by English writers. The few books by Americans were still written in the style of writers in England.

2. Allow a variety of responses that show an understanding of the need for national identity.

3. Responses should bring out the idea that different circumstances and conditions require different ways of life.

4. A person had to be able to provide for most of his own needs, not be easily discouraged, and have the strength to endure hardships and dangers.

Booklet 13

1. They learned the art of dyeing cloth, preparing smoked meats and other foods, and how to entertain at tea.

2. He discovered/invented the lightning rod, which prevented a great deal of damage to buildings from electrical storms.

3. People gathered for tea and to share news.

4. The responses should bring out versions of the story about the lost child found by an Indian and his dog.

Booklet 14

1. Englishmen tended to act superior, order people around, and complain about the food and drink.

2. Responses should bring out the idea that first impressions may not be "true"—it takes time to learn what people are really like.

3. He built storehouses for grain, taught the settlers how to make potash and maple sugar, which could be sold or used in the community, and did not pressure his renters for payment if they were having hardships.

4. Responses should include persistence and common sense.

Booklet 15

1. Responses should include the development of skills, increasing employment and variety of jobs, and stimulation of new ideas.

2. There would be more consumers and markets for farm goods.

3. He believed manufacturing centers had an evil and unhealthy effect on the country and the people.

4. Farmers and people close to the land were considered more honest, pure, dignified, good, etc., than those who worked in manufacturing.

Booklet 16

1. He argued that the government ignored the will of the people and the people had a right to change their government by adopting a new constitution.

2. Dorr believed the people should have the supreme power, since this right was established in the U.S. Constitution.

3. Two governments had been established in the state and people were divided.

4. The conservatives believed Dorr and his group were troublemakers and radicals who were concerned only about their own interests, not those of the people.

Booklet 17

1. Slave labor produced crops worth millions of dollars. Loss of these crops would mean a loss of sales, and shipping, trading, and other industries would suffer.

2. Cotton was a main crop and raw material for the textile industry.

3. He believed this was a duty as set down by the Constitution. He also wanted to maintain peace and preserve the Union even if it meant allowing slavery.

4. The law strengthened the practice of slavery, which he was very much against.

Booklet 18

1. Responses should bring out the idea that people's views were based on their beliefs about the "right" or "wrong" of slavery.

2. Both pro and con groups used the Constitution to support what they believed, each group interpreting it in its own way.

3. Many whites believed black people were inferior and had no rights. Their views were not based on factual backgrounds, since many whites knew nothing about the ancestry, language, way of life, etc., of black people.

4. John Brown believed that his death would help bring justice to black people.

Booklet 19

1. Responses should point up the support for labor or working people and the strength of the unions.

2. The Pullman Company blamed the depression and poor business for its layoff of workers and lower wages; the workers accused the company of taking advantage of them with high rents, high utility costs, and cuts in wages while paying stockholders well.

3. Responses should lead to the idea that the Pullman Company required all workers to live in houses they owned—i.e., in company towns.

4. Responses should generally bring out that improvements are made in an orderly way, city life can be more pleasant if planned, and planned communities attract business which provides economic growth.

Booklet 20

1. Education helped people learn the language and prepare for jobs.

2. Responses should allow for students' opinions but lead to the idea that immigrants probably worked at unskilled jobs because of language difficulties, differences in life styles, and lack of skills.

3. Workers in Hull House helped immigrants adjust to a different way of life, to become educated, and to learn skills for jobs.

4. Any reasonable responses should be accepted.

Booklet 21

1. Mrs. Jones claimed that government is supported by men and only they are strong enough to maintain and preserve society. Since men may also have to die for a state it was only right, in her view, that men should form the government.

2. He said that it was silly to say that women could not vote because they did not fight. He said many men could vote who were too old or ill to become soldiers.

3. Many women did not think it was a necessary right or believed they did not need such power.

4. Responses would depend on students' knowledge of the "women's lib" movement.

Booklet 22

1. Responses should indicate the possibility of a connection between the large number of immigrants flooding the country and Americans' fear of so many foreign-born and their differences in life styles.

2. The government commits illegal acts when a department or official of the government uses its his power without regard for individual rights, as established by the Constitution.

3. Mr. Post investigated cases where injustice had been done and published his findings; he also worked to protect individuals' rights.

4. Responses should include descriptions of hypothetical cases in which government officials use force or ignore rights of individuals.

Booklet 23

1. Hoover claimed the New Deal would destroy the American system because of government interference in economic and social life.

2. Responses should indicate an understanding that people might demand changes in government as a means of bettering their way of life.

3. Such presidential talks often give people a feeling of security; a president can communicate in a more "friendly," relaxed manner, thus assuring people of his concern.

4. Any reasonable responses should be accepted.

Booklet 24

1. He planned to improve city finances, eliminate unnecessary jobs in government, demand a day's work for a day's pay, hire trained social workers for the Department of Welfare, and improve "housekeeping" services for the city.

2. Responses could include such things as references to graft, creation of jobs with no duties, and promotions based on friendship rather than talent or merit.

3. Any reasonable responses should be accepted with evidence to support a negative or positive answer.

4. The main issue was whether the city government should be run by a "political machine" with "boss rule" or by the government representatives of the people's will.

Booklet 25

1. This nonviolent protest brought attention to the situation and prompted court action. (Responses should also bring out that the boycott hurt the bus companies financially.)

2. Responses could include suggestions ranging from violent attack to bargaining.

3. He wanted to remind them to behave peacefully and with the dignity expected of a great people.

4. He felt he should continue to lead and set an example for his people to follow.

Booklet 26

1. Affirmative responses should be supported with evidence from the Worthington announcement; negative responses should be supported with evidence from President Kennedy's speech.

2. Reasons for President Kennedy's anger and evidence of his feelings can be found in phrases such as: "Their greed for power and profit is greater than their concern for the public"; ". . . will seriously cripple our efforts to fight inflation"; and so on.

3. Responses should bring out the relationship of the steel industry with almost all other industries in the country and the effect of steel prices on the prices of other products.

4. Responses should allow student opinions about such things as public interest, corporate responsibility, profit, and price controls.

Booklet 27

1. Black Power people do not agree with the nonviolent approach of Martin Luther King, Jr.

2. Black people have not been able to exercise their rights as promised in the U.S. Constitution.

3. All indicate a need for action now—a sense of urgency—to bring about changes for a better way of life.

4. Responses should center on the idea of self-help and individual improvement as a means of building new inner cities. The Coalition also emphasizes the need for cooperation among people in all levels and areas of society.

Booklet 28

1. It is necessary to understand the types of people involved to get at the causes of riots and attempt to prevent further violence. Responses as to reasons for the riots should include examples of various types of segregation, discrimination, and obstacles black people face and bring out the anger and fear between whites and blacks.

2. Responses should indicate understanding that underlying problems made the situation explosive —one act was like a spark lighting a fuse.

3. Responses pro or con should be supported with statements which indicate understanding of feelings and way of life of the rioter or the counter rioter.

4. Responses should be student opinions.

Booklet 29

1. Responses should be student opinions based on ideas expressed by Senator Fulbright.

2. Responses should indicate an understanding that Senator Fulbright sees the United States as being a power so sure of itself that Americans often assume it is their duty and "right" to control those countries which do not act "correctly."

3. Some differences that can be noted are pride vs. responsibility; arrogance vs. duty; unpopular foreign policy vs. grateful nations.

4. Both affirmative and negative responses should be supported with ideas expressed on the uses of power in the two different articles.

Booklet 30

1. Responses should indicate an understanding that Margaret Mead believes everyone is responsible for pollution and also for solving the problem.

2. Definitions for these popular terms should be suggested by material in Margaret Mead's speech.

3. Responses could include some of Dr. Mead's general solutions such as education, legal action, and so on, or students might decide the problem cannot be solved in so short a time.

4. Responses should be student opinions based on their knowledge of present trends and/or conditions in female employment opportunities.

Booklet 31

1. Setting goals provides some order and direction for a president's actions and policies.

2. Some similarities are found in goals for the environment, education, crime prevention, and others.

3. Methods to be included in responses are such things as legal action, molding public opinion, and executive orders.

4. Responses should be based on student experiences or knowledge of present situations in the economy, environment, and so on.

Booklet 32

1. Responses should be based on ideas brought out in the selection from Mayer, including the need for beauty, safety, order, and so on.

2. Responses should include not only pollution but also the idea that Americans have not balanced their use of technology with nature.

3. They all portray different parts of American society as destructive or wasteful.

4. Any reasonable responses should be accepted.

Booklet 33

1. Some common problems might be loneliness, difficulty of earning a living from creative efforts, and lack of an appreciative audience.

2. Descriptive phrases could be cited from the article on New York City sounds, or responses could be based on students' own observations.

3. Benefits can include the opportunity to live without being criticized, the chance to become more aware of one's surroundings and do things for oneself.

4. All reasonable value judgments should be accepted.

Booklet 34

1. Responses should include inequalities as cited by Gans such as individual rights, differences in medical and legal aid, differences in economic status, and so on.

2. Suggestions might include the idea of public opinion or how public pressure brings about changes.

3. Responses should be student opinions based on the view of the modern family or the view of the traditional family.

4. Some problems might be boredom, lack of incentive to work, health hazards because of too little to do, and so on.

Booklet 35

1. The poor live in run-down sections of cities because they are unable to buy or rent in areas where prices are higher; they have few skills to acquire better jobs to improve their way of life; often they are restricted to certain sections because of objections to public housing or less expensive housing in middle-class areas.

2. The causes of neglect could include such things as illness of the older poor, their inability to move around and be noticed, and the idea that people are more concerned about youth in this country than the elderly—older people are given little respect.

3. Responses should bring out the low visibility of the poor, lack of political power, distance from the middle class, and lack of concern on the part of those more fortunate.

4. Besides the strikes by public employees (mentioned in the article by Walter Lippman), other situations such as power failures, transportation break-downs, and violent protests might be mentioned.

Booklet 36

1. Benefits should include improvements in transportation, housing, industrial developments, and water filtration.

2. Any reasonable responses should be accepted.

3. Responses should indicate an understanding that man may use his time to plan and prepare for pleasant ways of life. His hobbies may become more important than his job.

4. Problems of water supply appear to be the most urgent, but responses could be student opinions supported by projections or evidence that indicate urgency and importance.

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